

VOLUME I  
PERFORMANCE FLIGHT TESTING

APPENDIX C-1  
PITOT-STATIC POSITION  
ERROR RELATIONS

DTIC QUALITY INSPECTED 4

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USAF TEST PILOT SCHOOL  
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DISTRIBUTION STATEMENT A

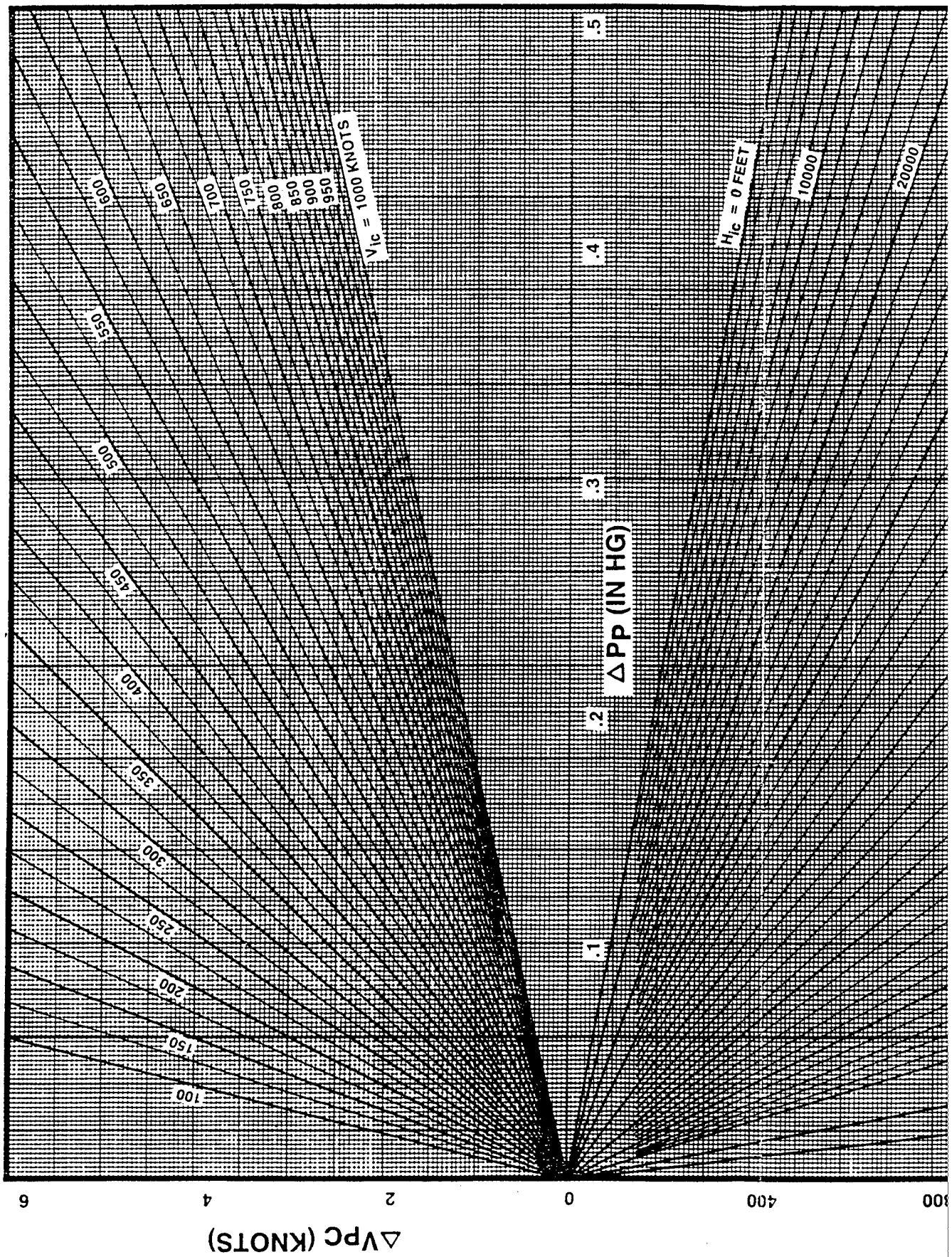
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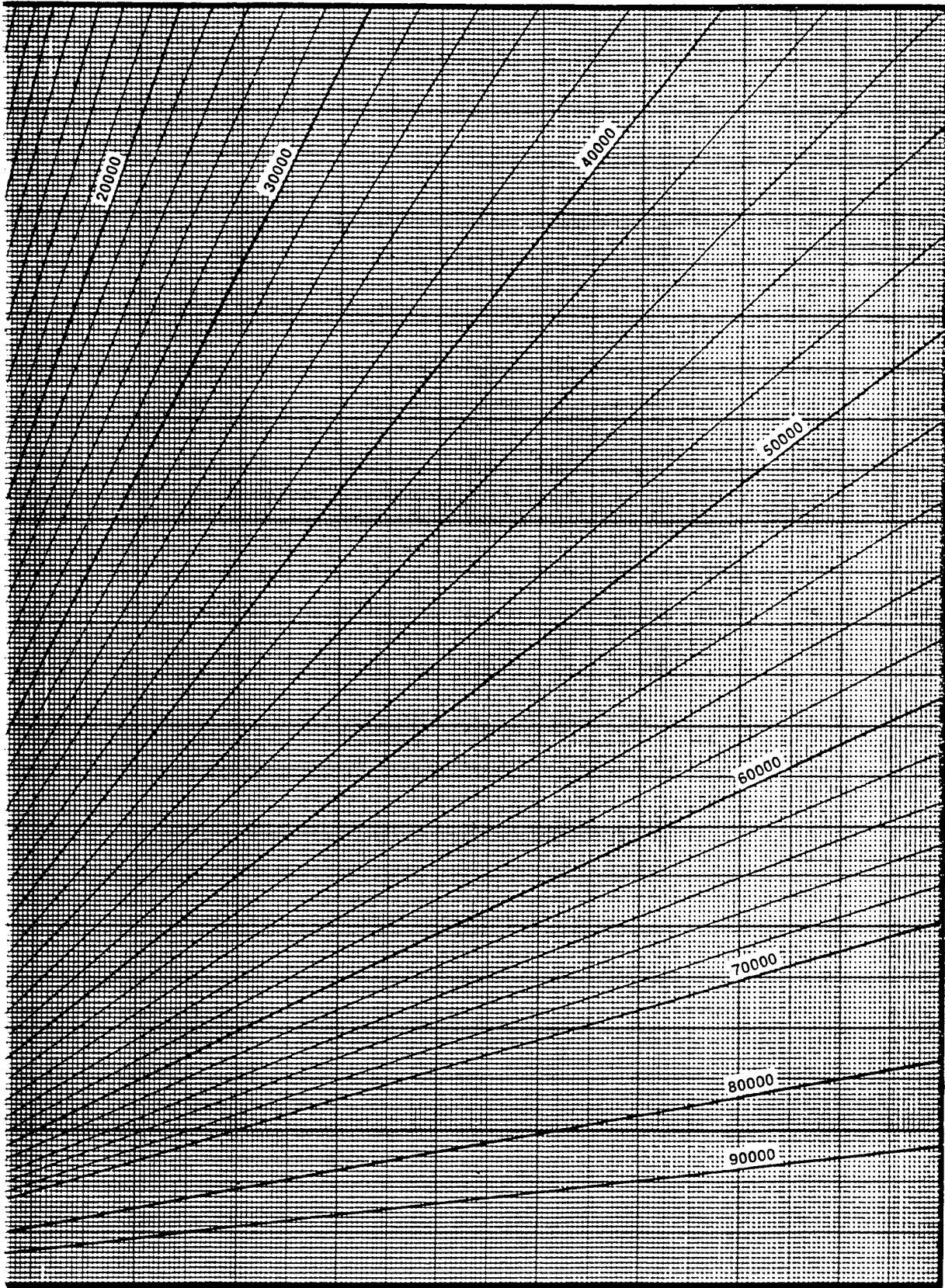
# APPENDIX C-1

## PITOT-STATIC POSITION ERROR RELATIONS

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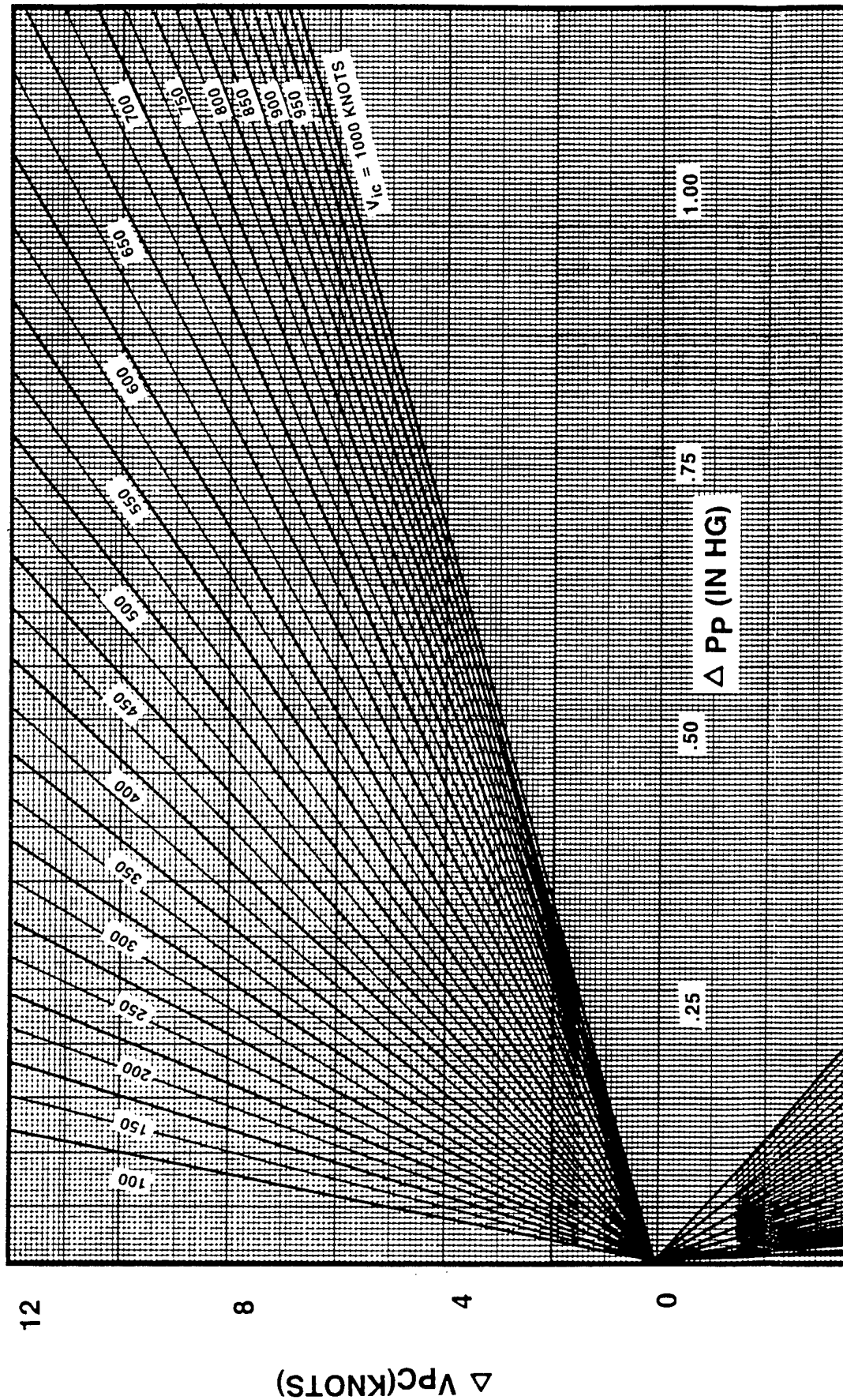




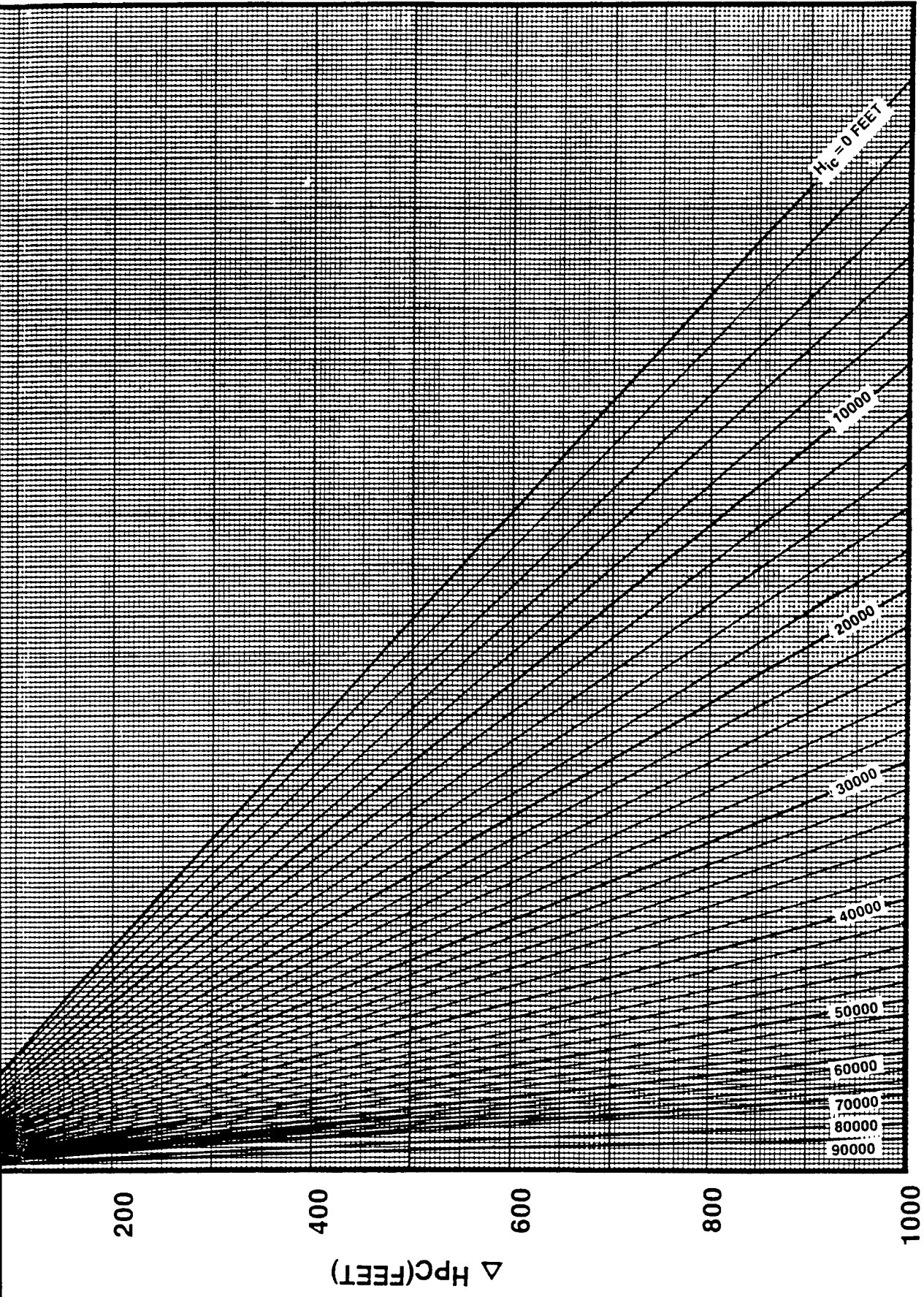
C-1-1

$\Delta V_{PC}, \Delta H_{PC}$  vs  $\Delta P_P$

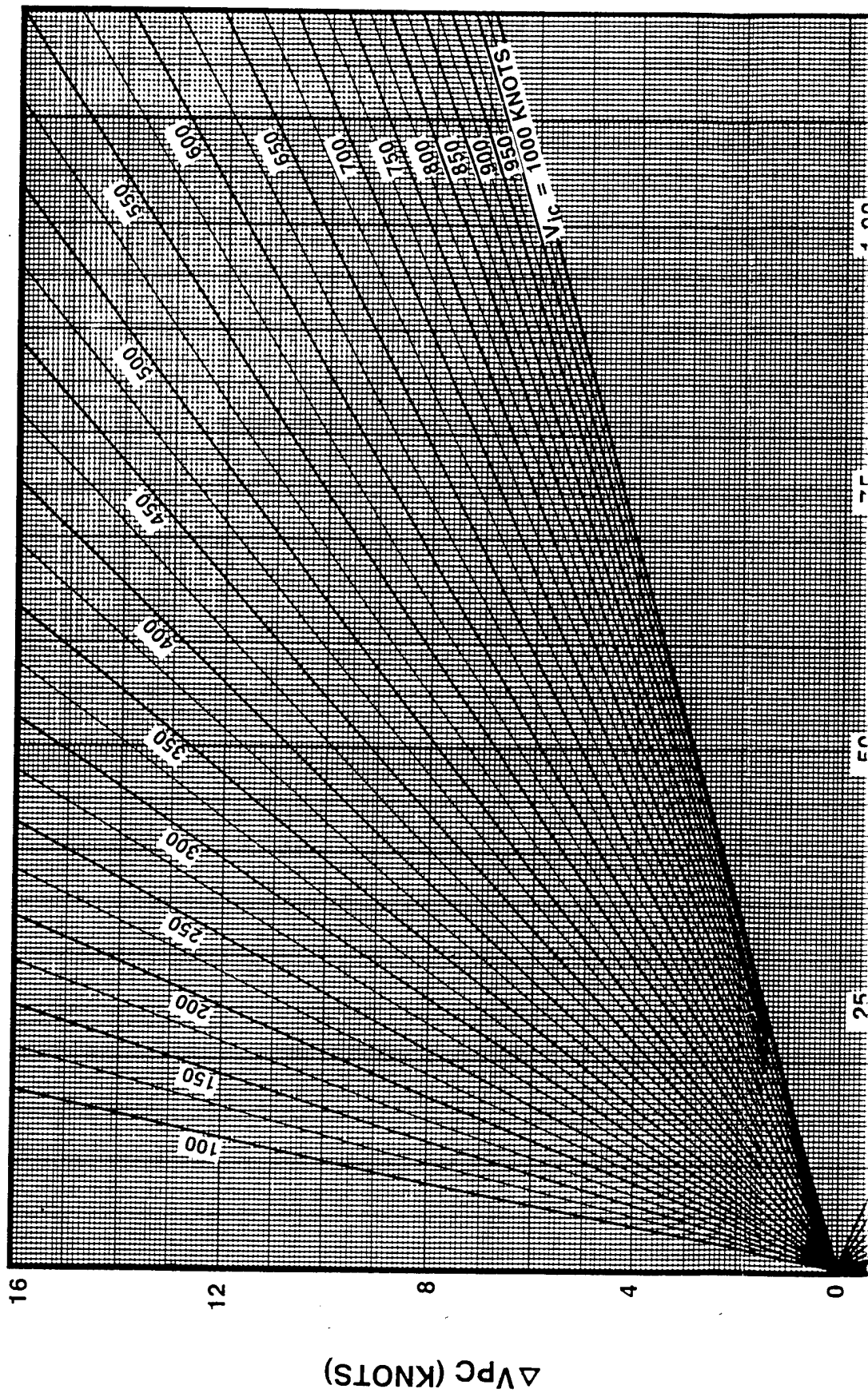


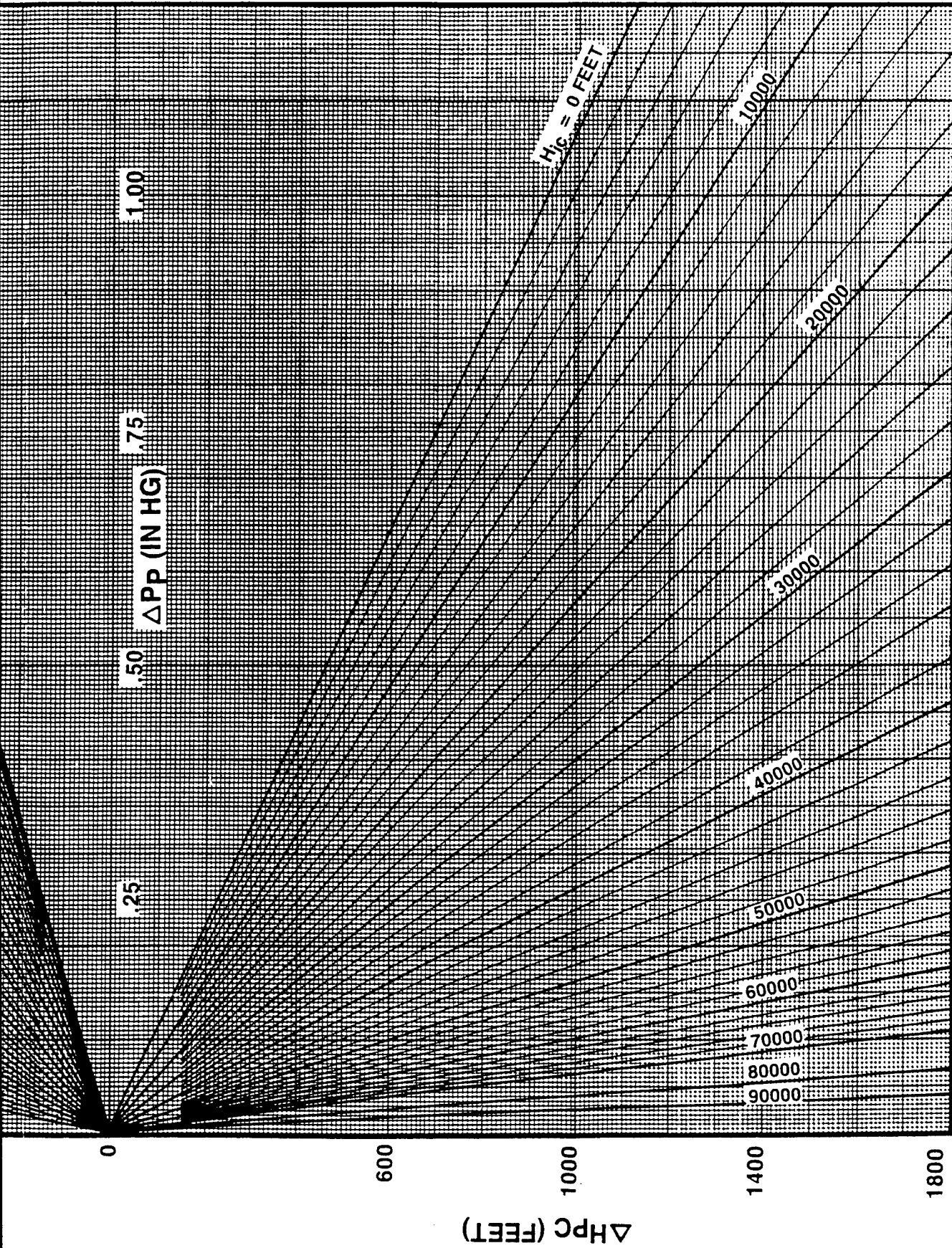


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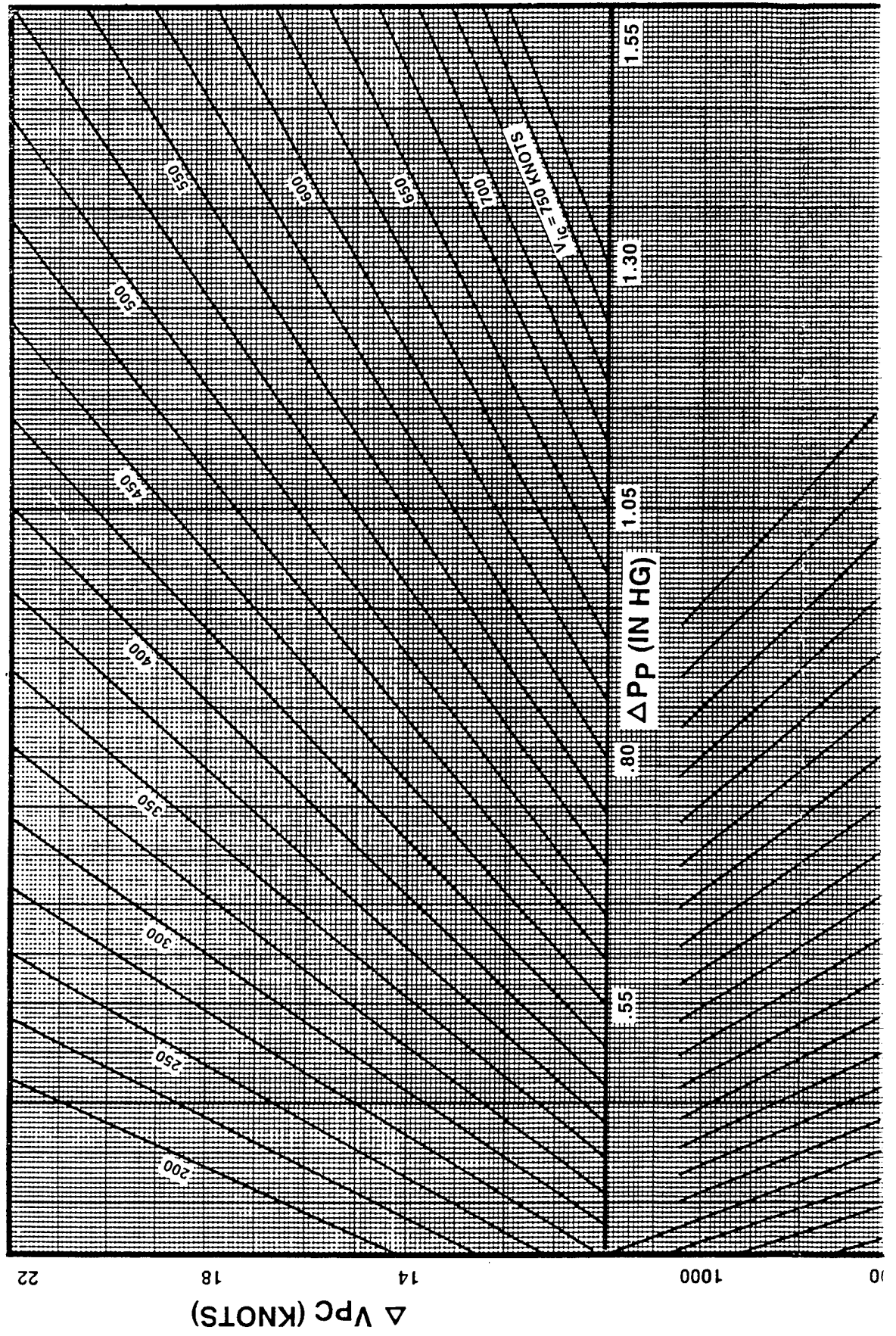
$\Delta V_{PC}$ ,  $\Delta H_{PC}$  vs  $\Delta P_P$





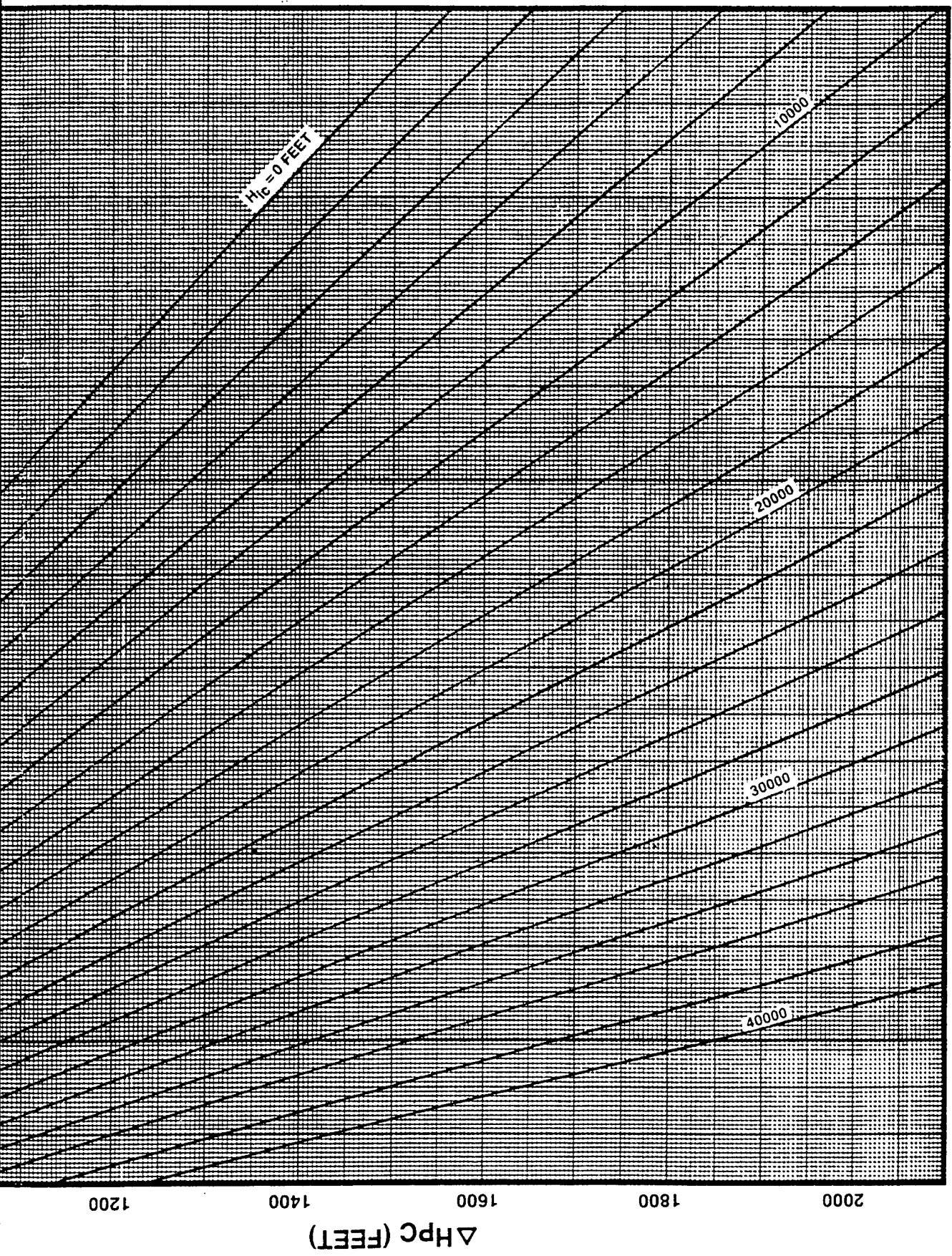
$\Delta VPC, \Delta HPC$  VS  $\Delta PP$





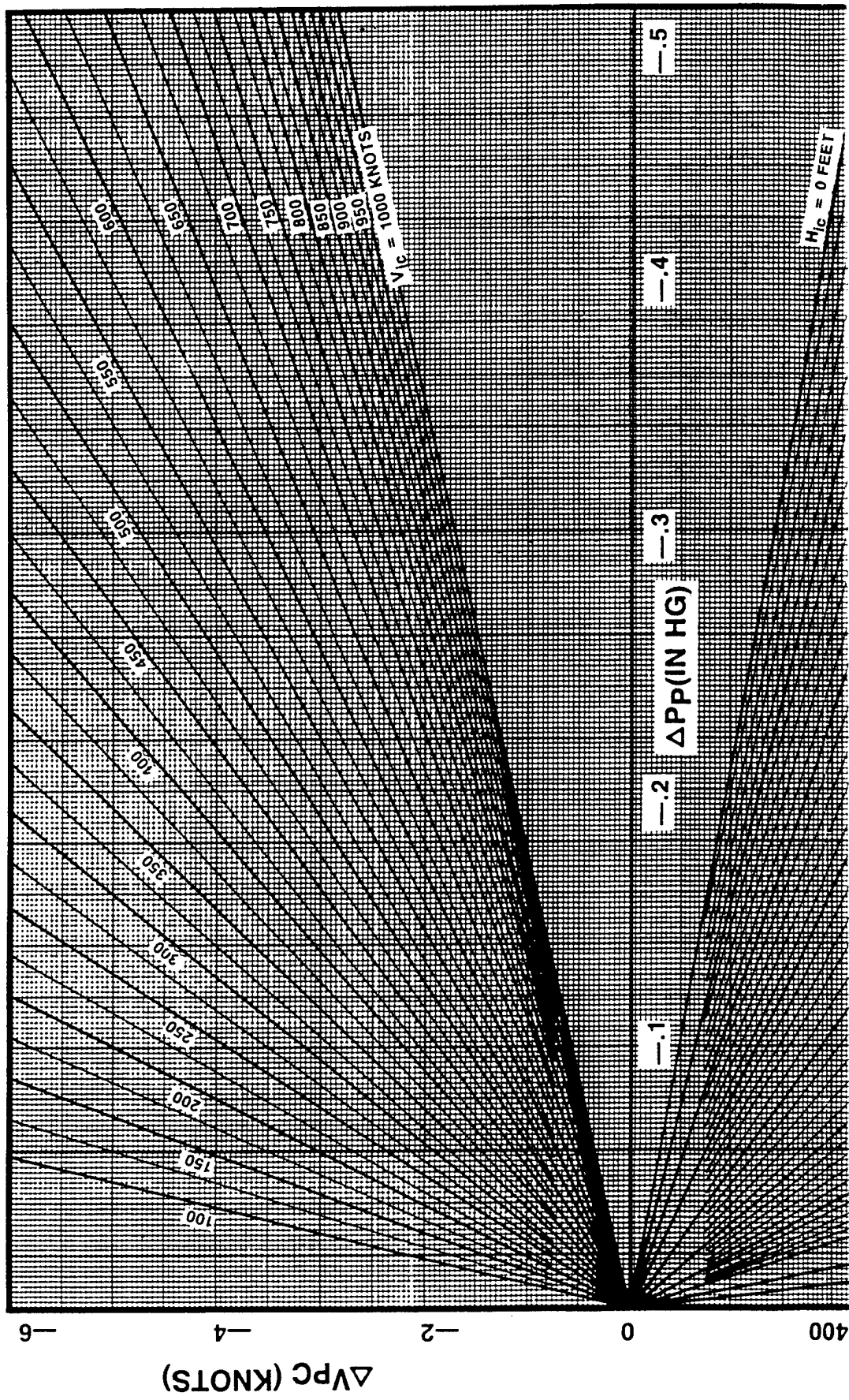
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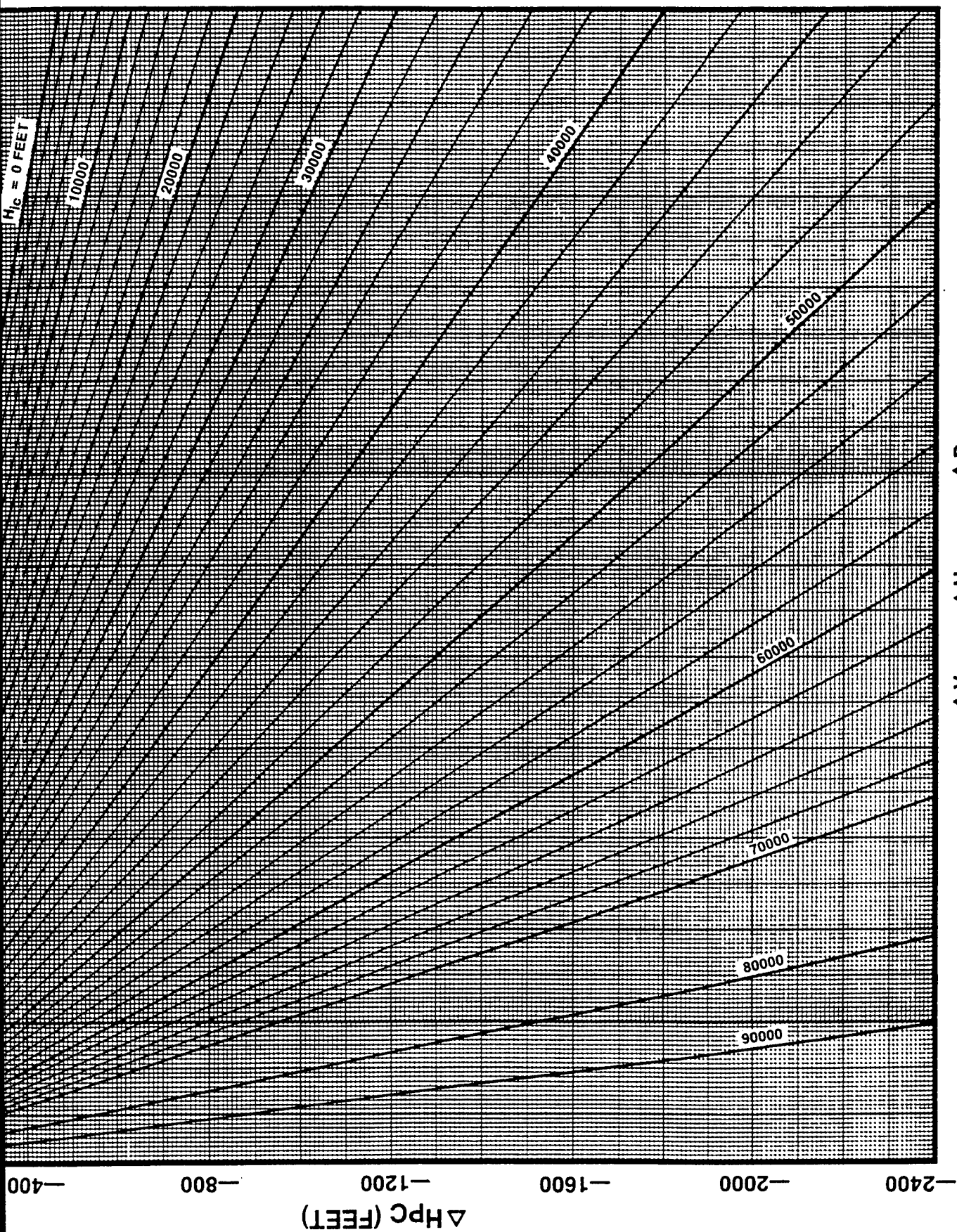
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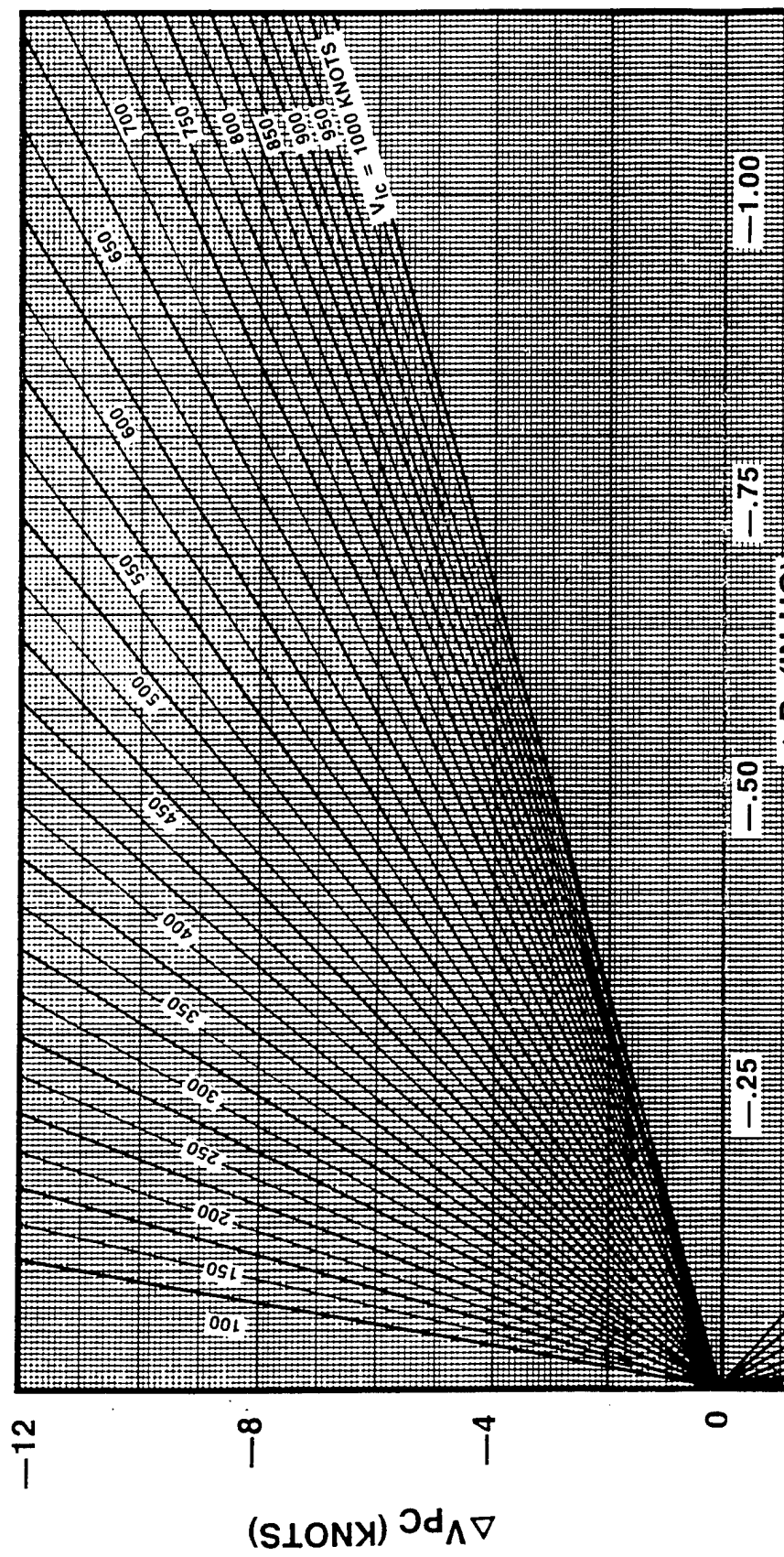
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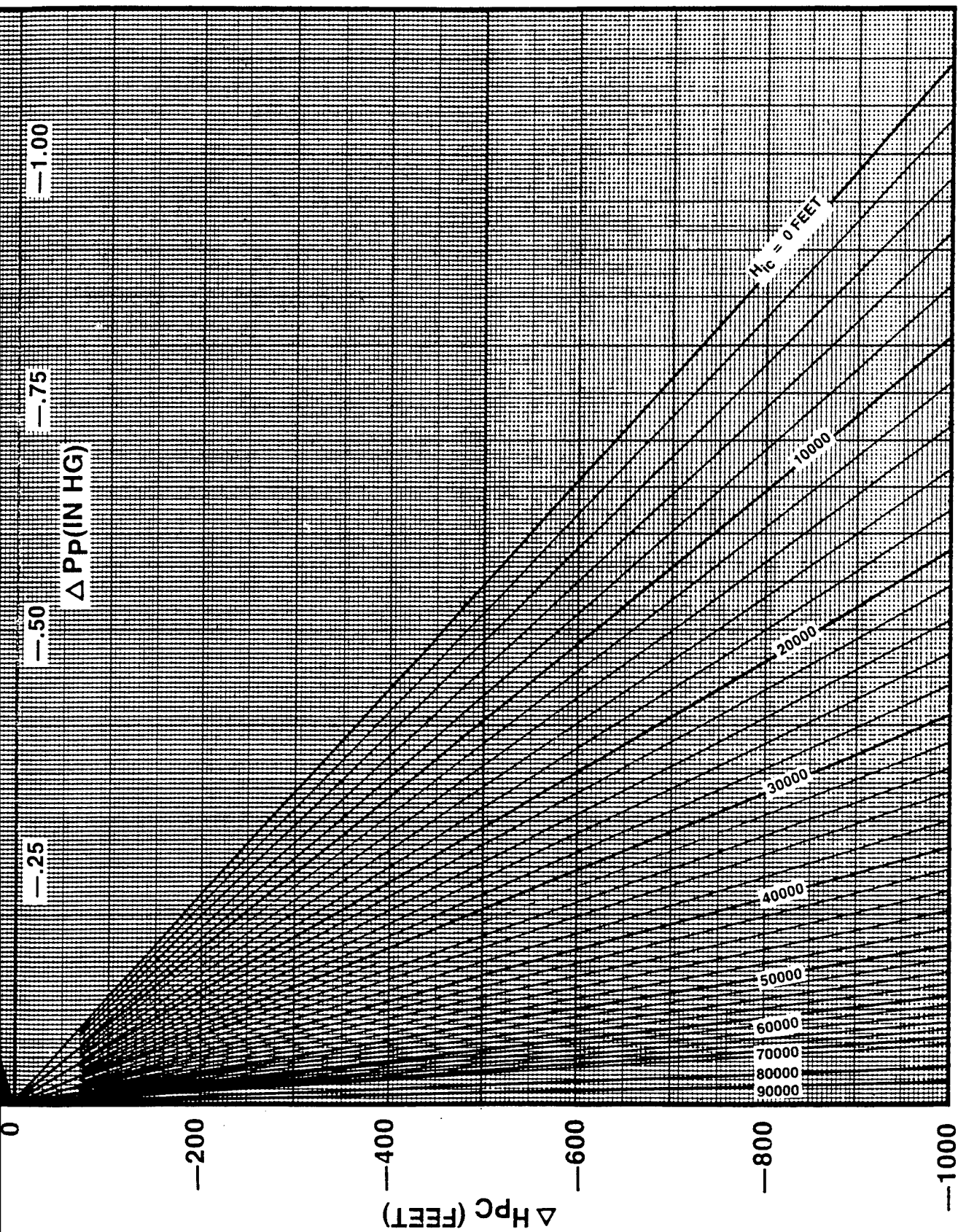




$-\Delta VPC, -\Delta HPC$  vs  $-\Delta PP$

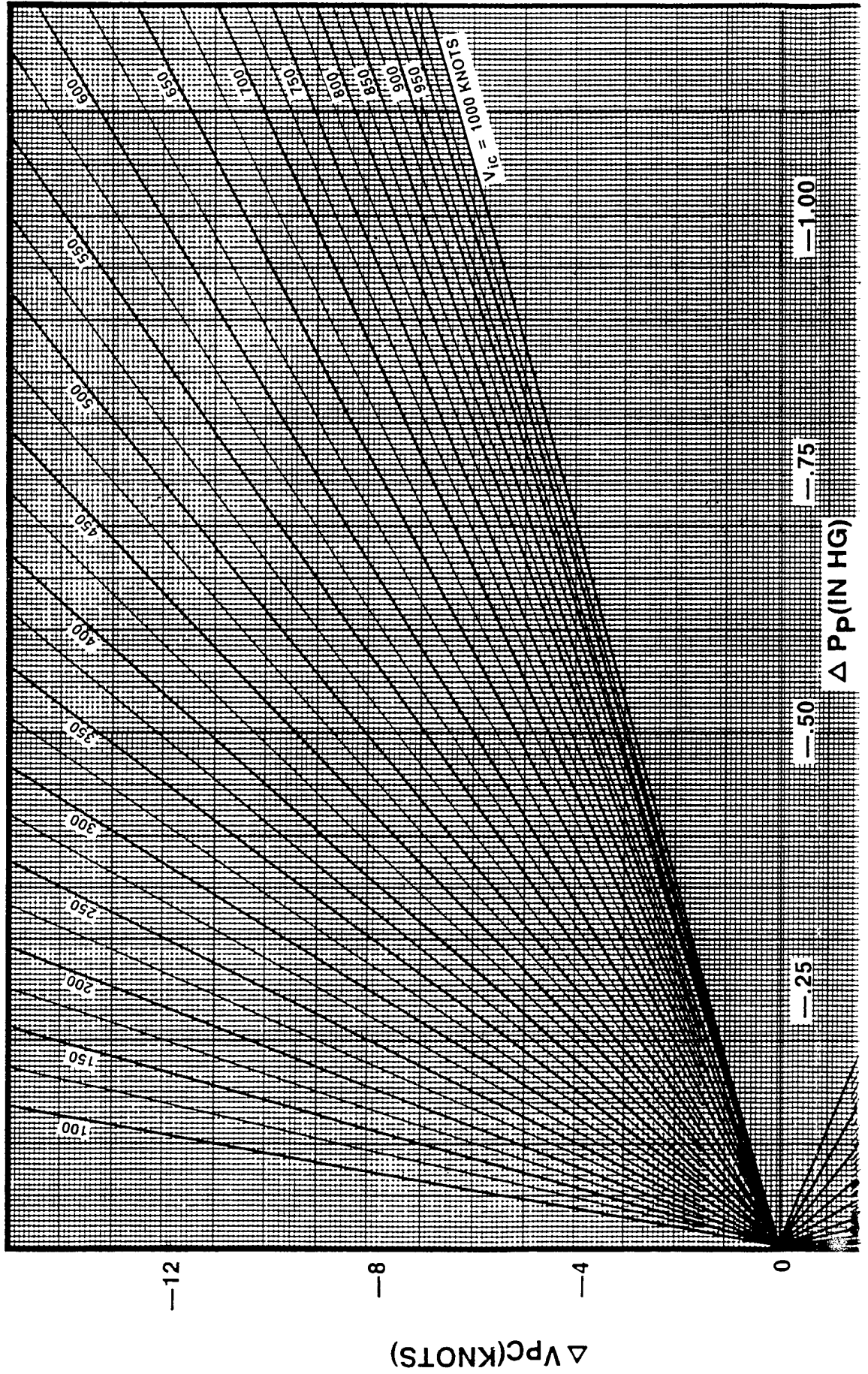
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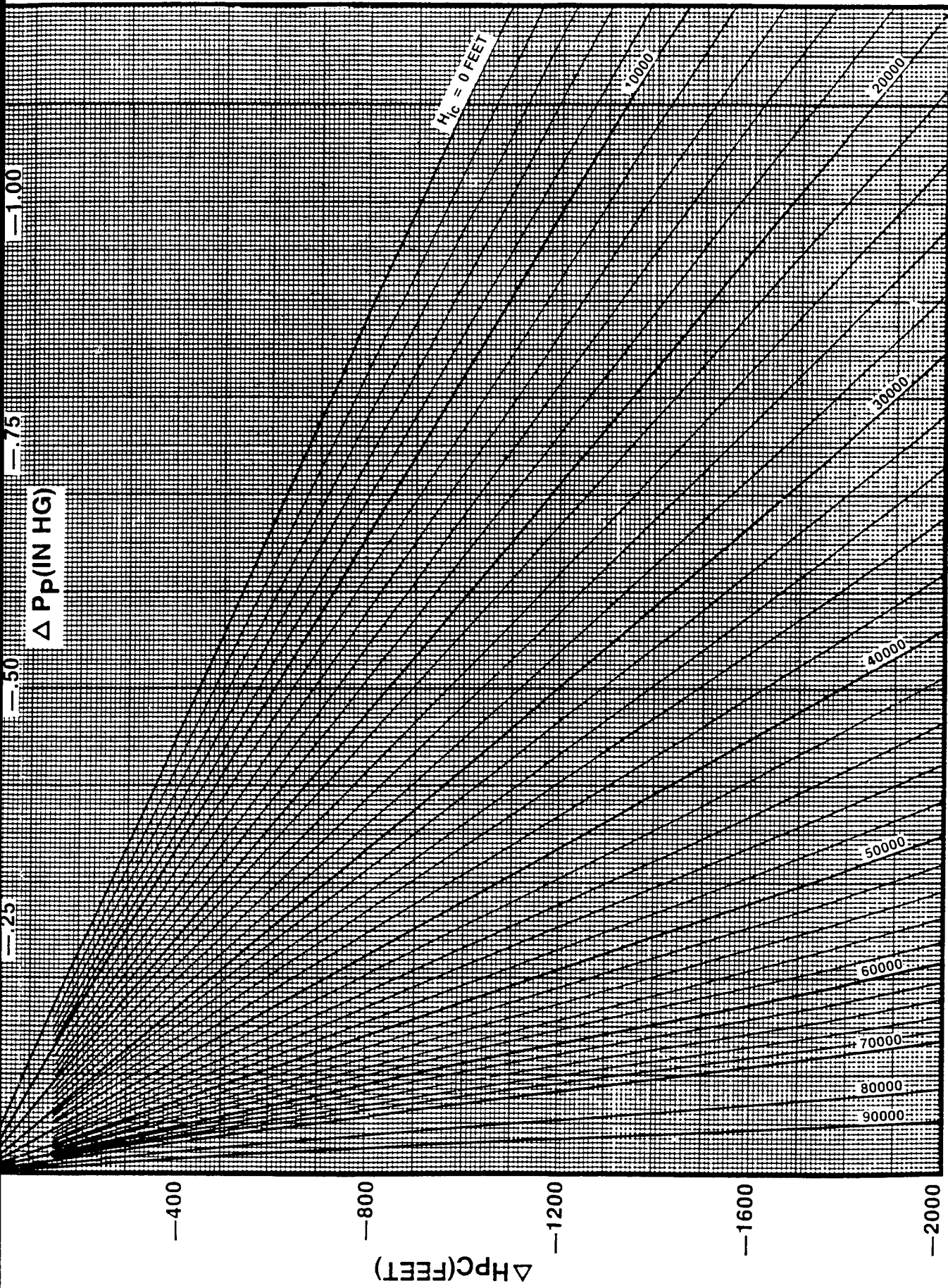




— $\Delta V_{PC}$ , — $\Delta H_{PC}$  vs — $\Delta P_P$



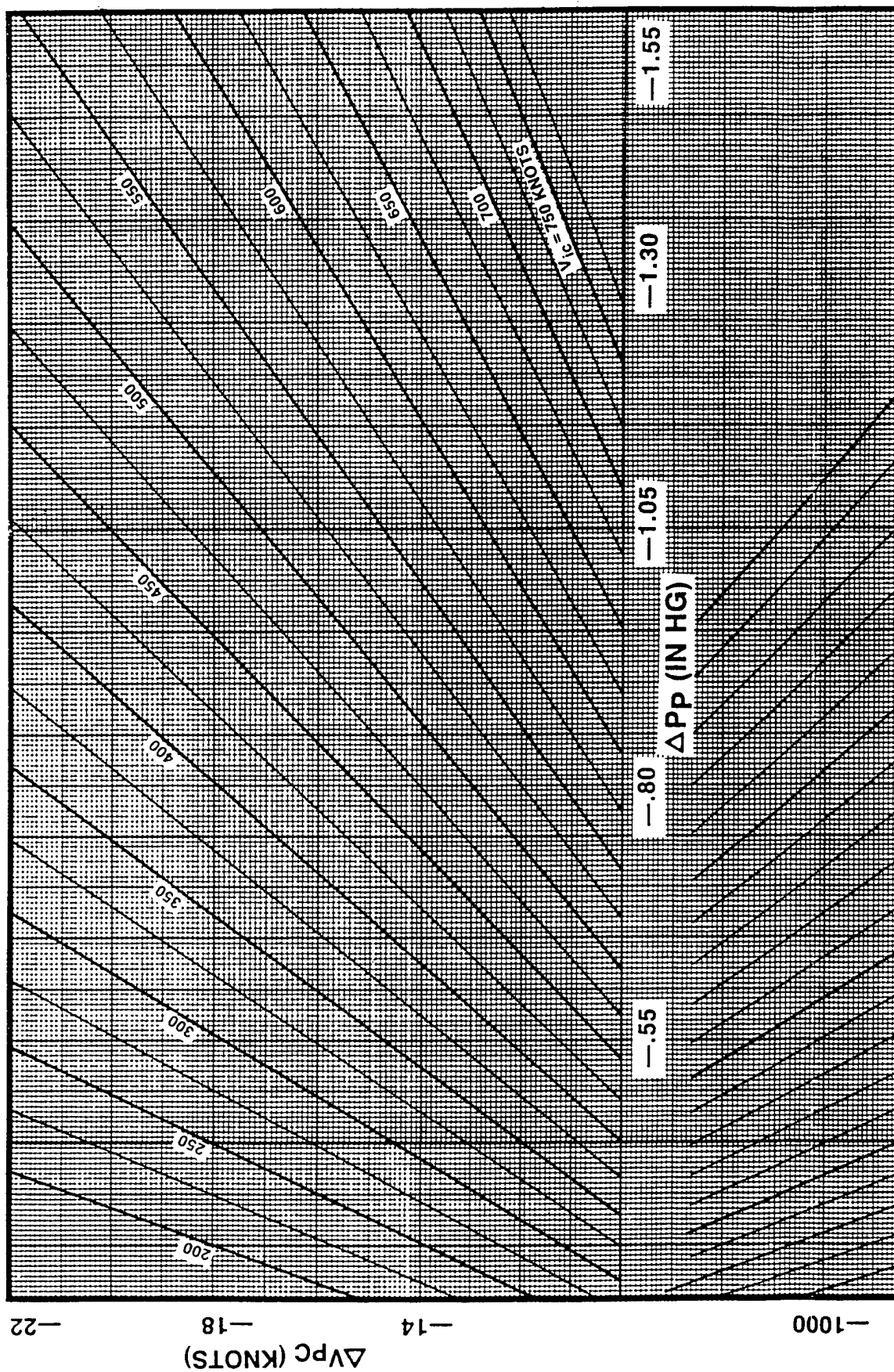




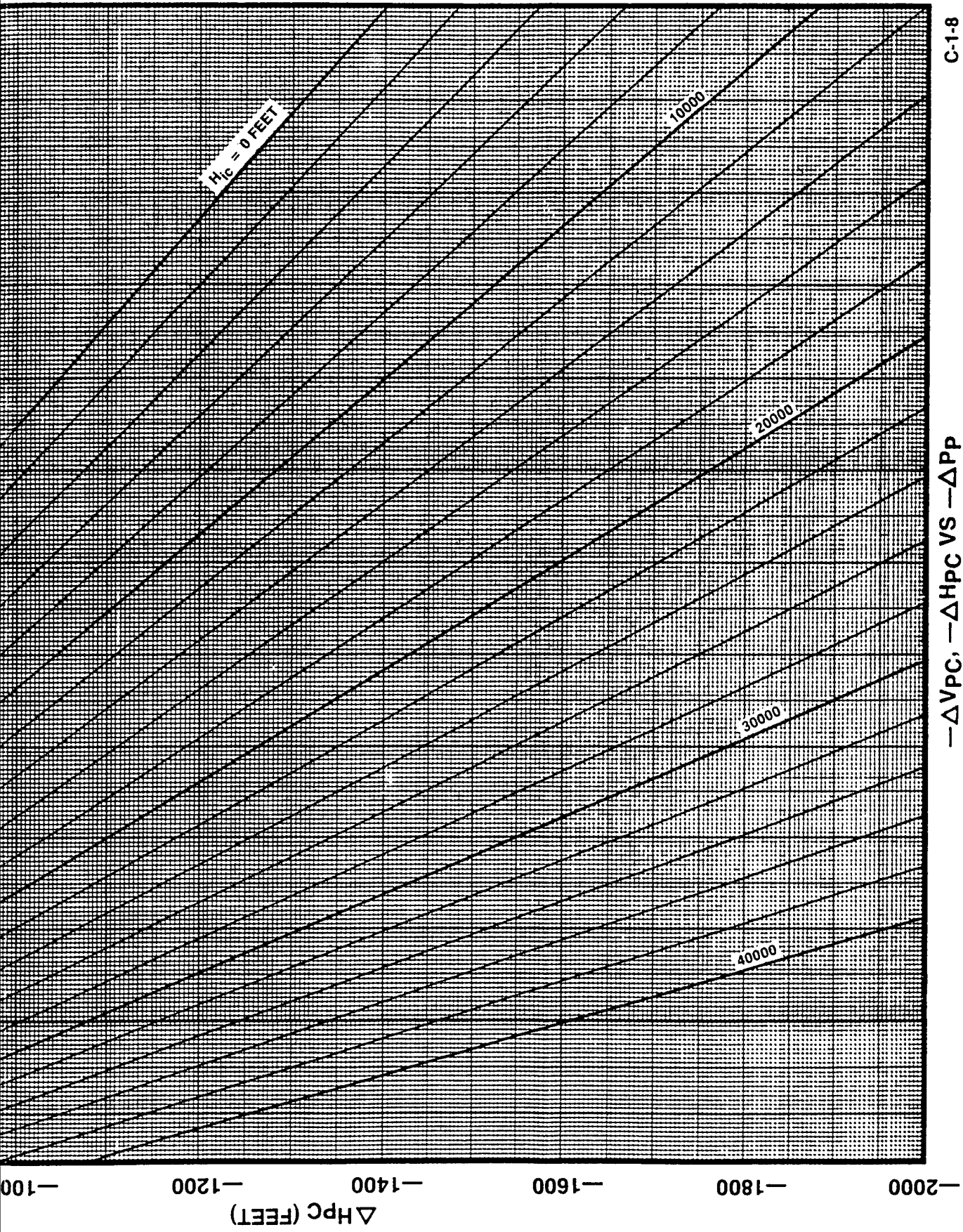
—  $\Delta V_{PC}$ ,  $\Delta H_{PC}$  vs —  $\Delta P_P$

2



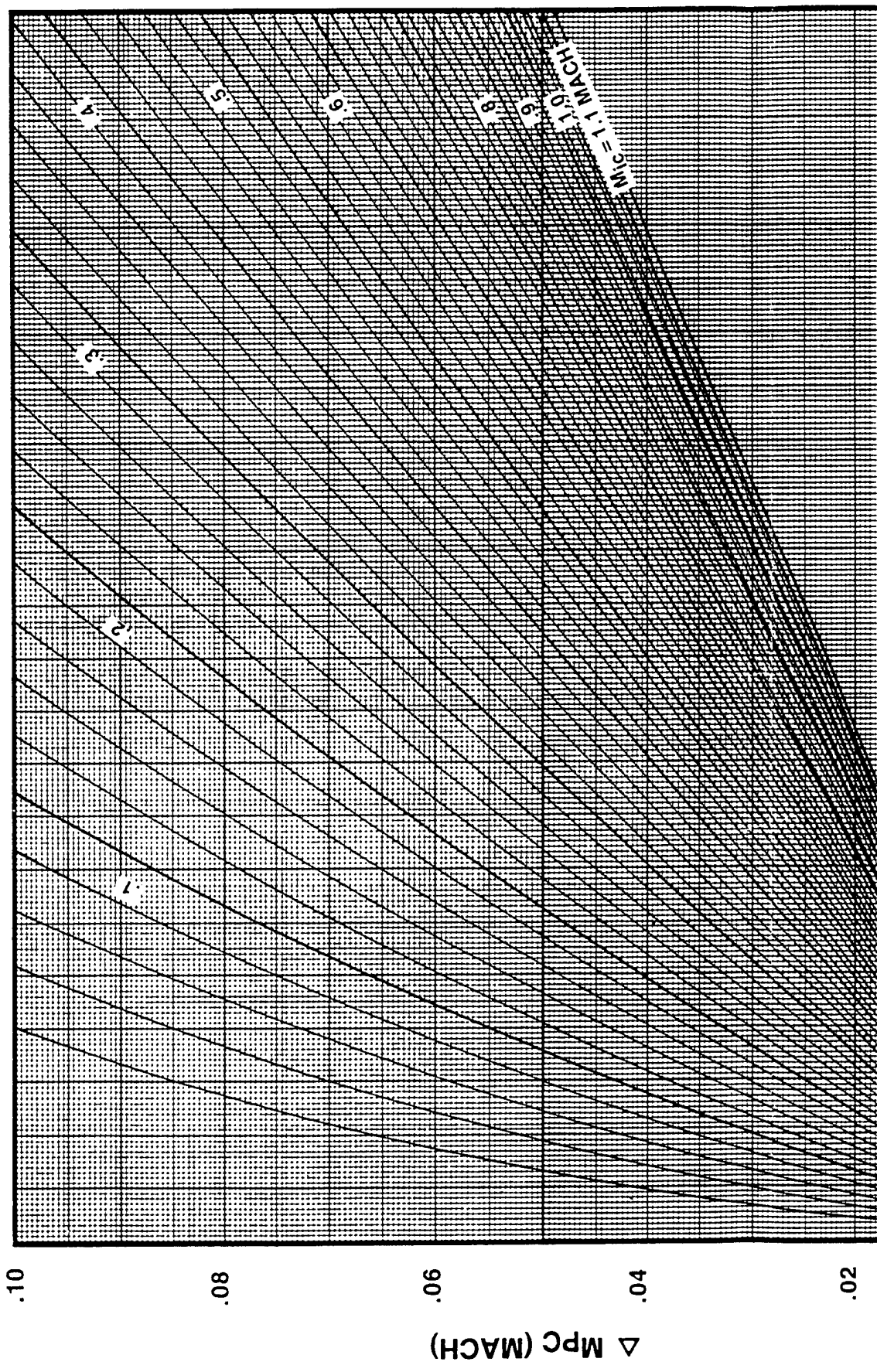


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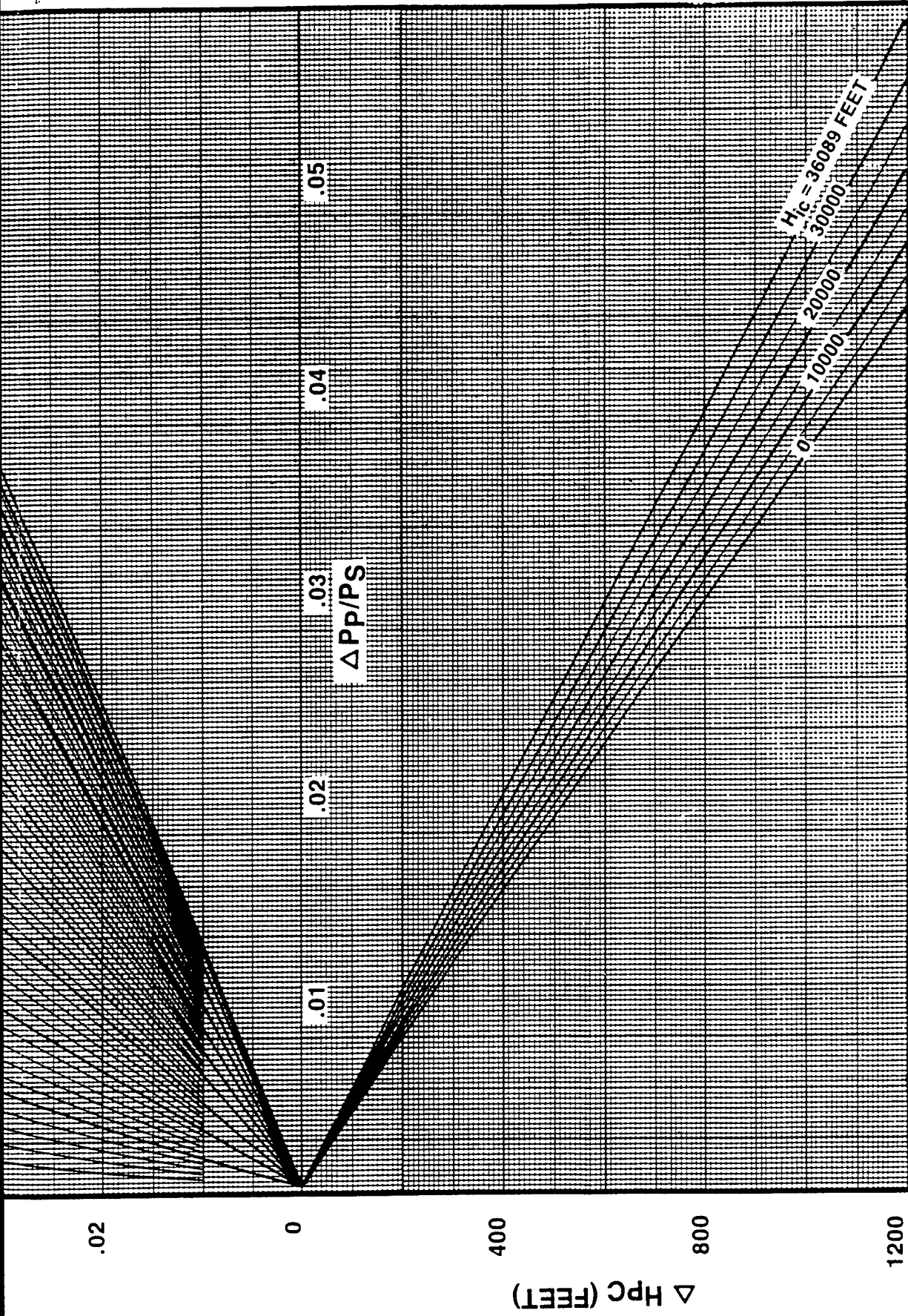


C-1-8

1

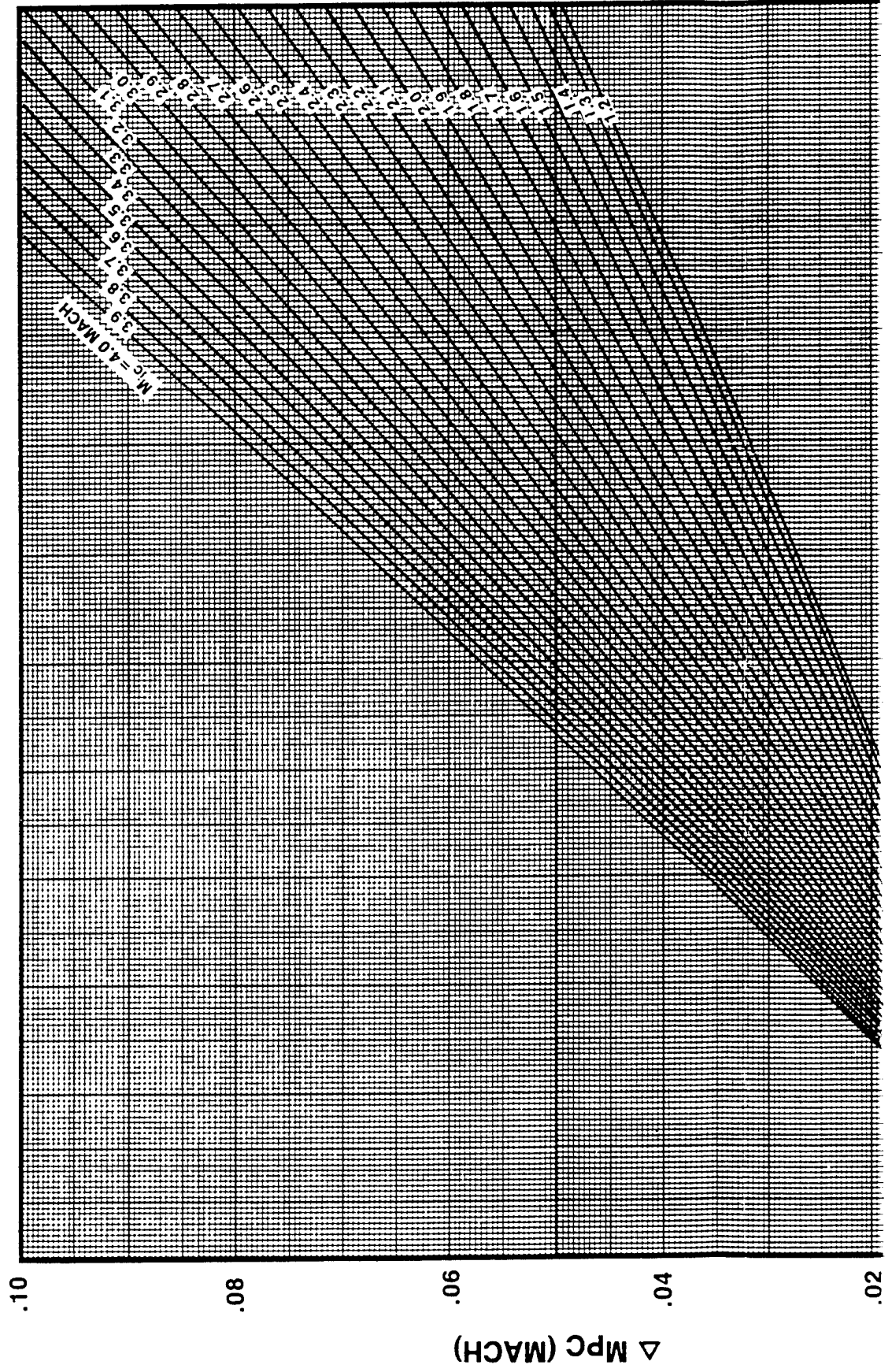


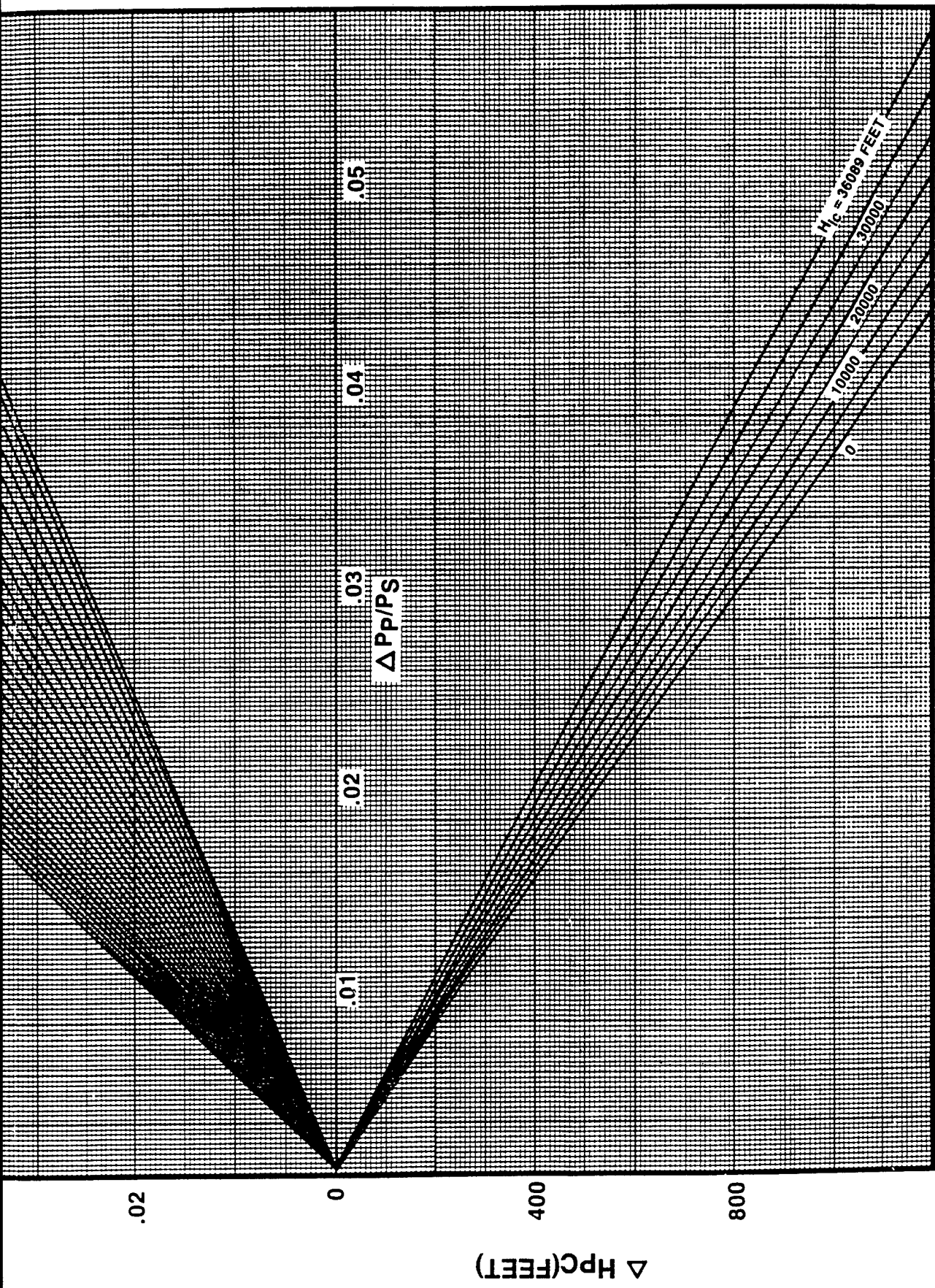




$\Delta M_{PC}, \Delta H_{PC}$  vs  $\Delta P_p/P_s$

11

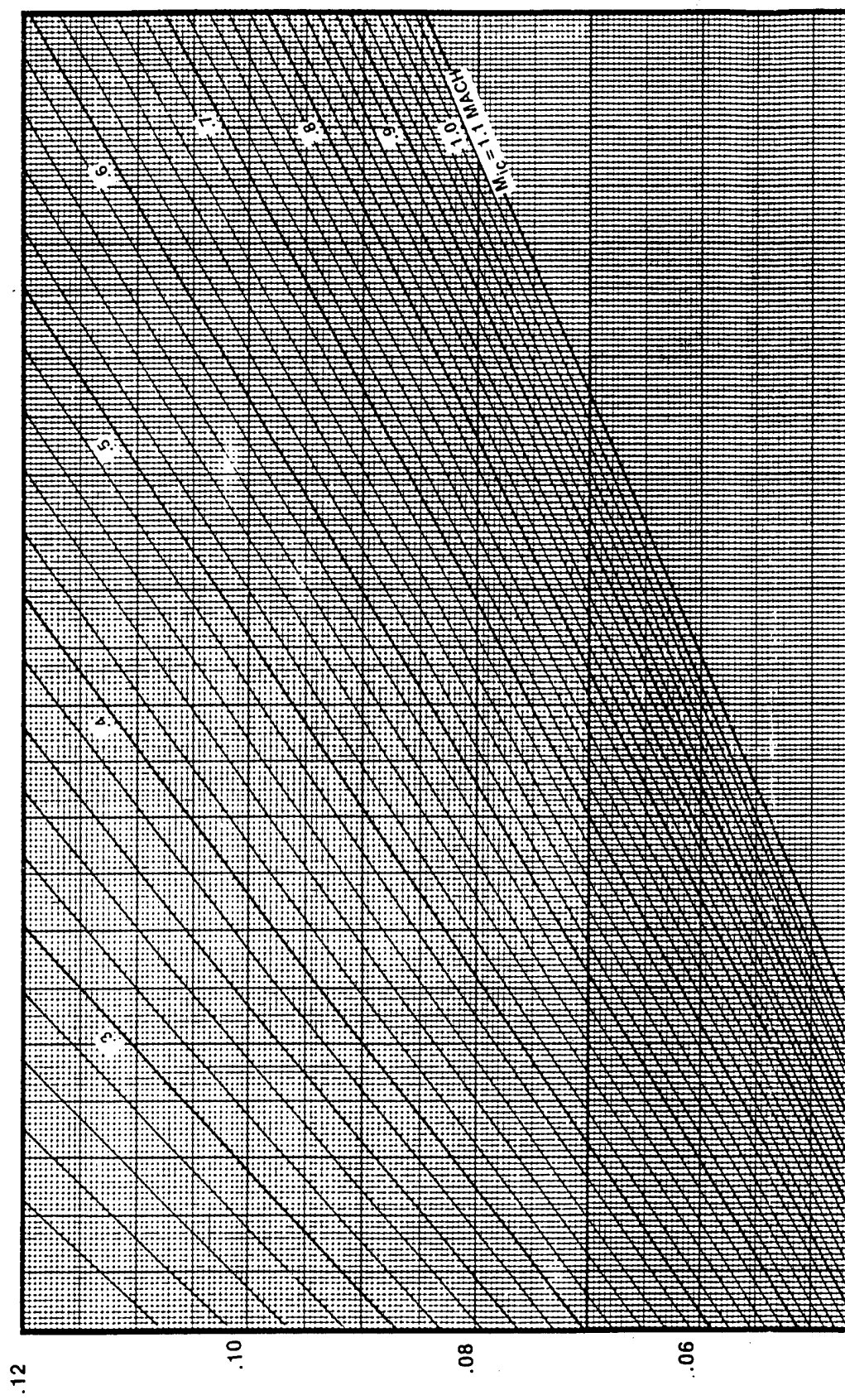




$\Delta M_{PC}, \Delta H_{PC}$  vs  $\Delta P_p/PS$

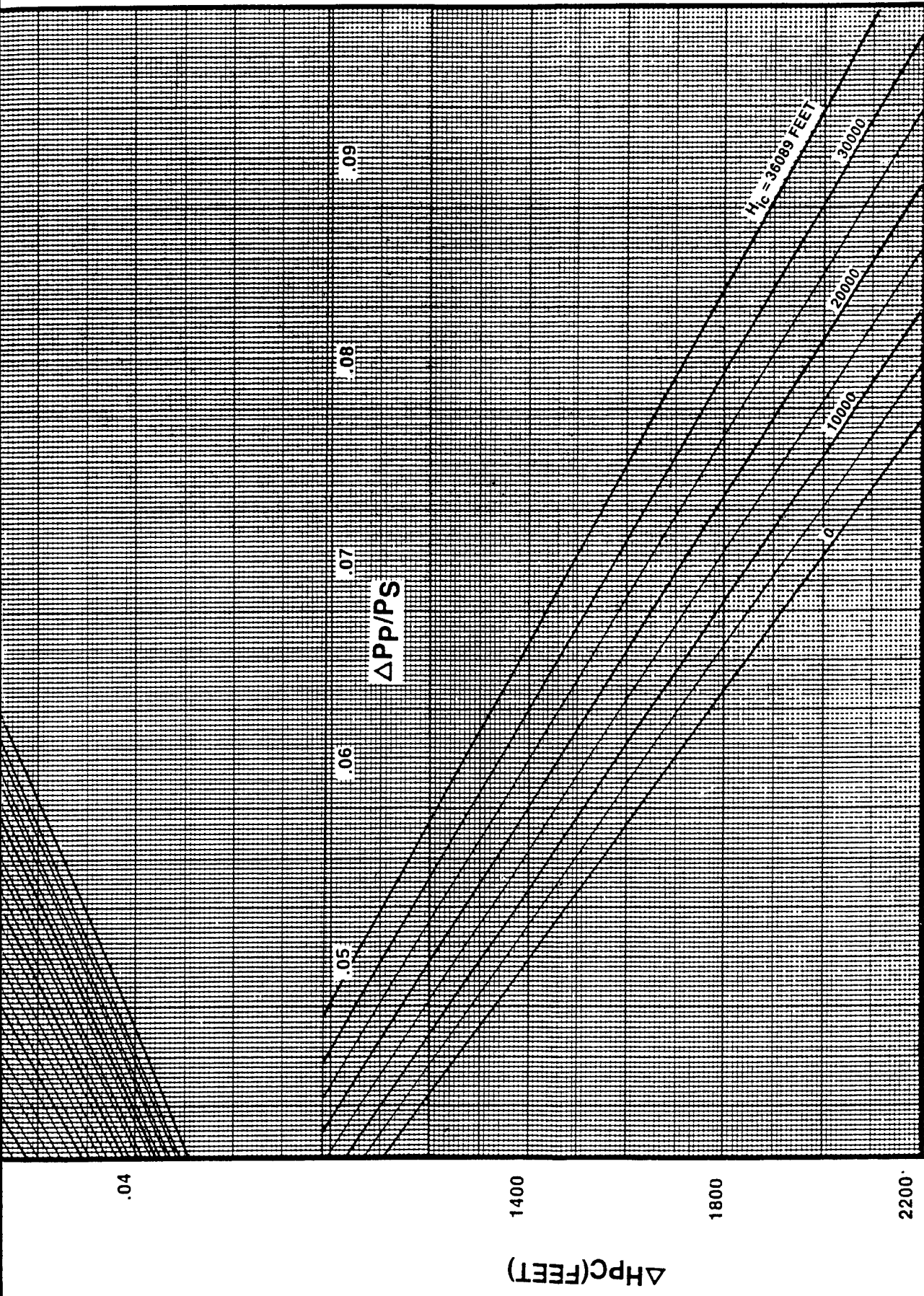


①



$\Delta MPC(MACH)$

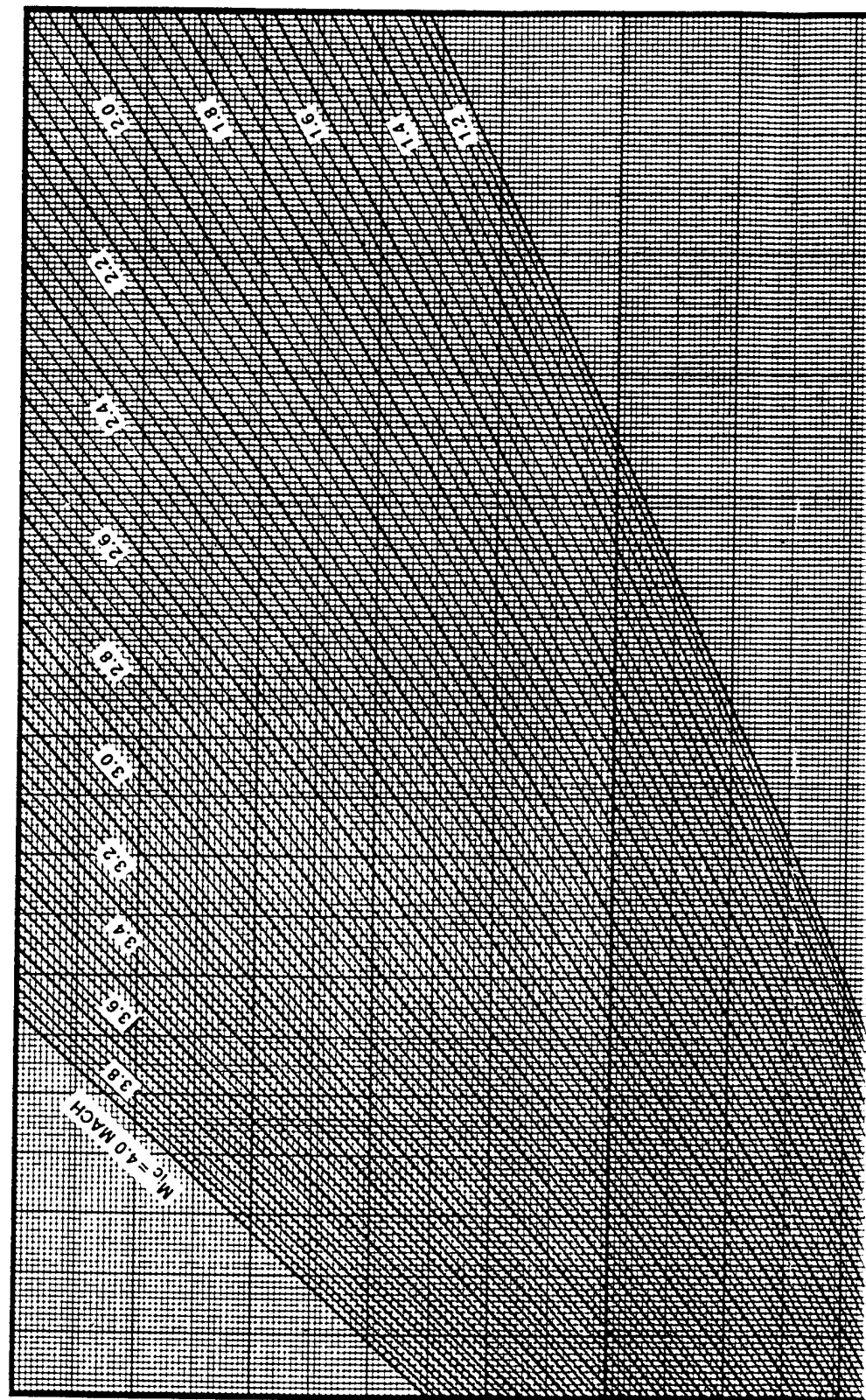
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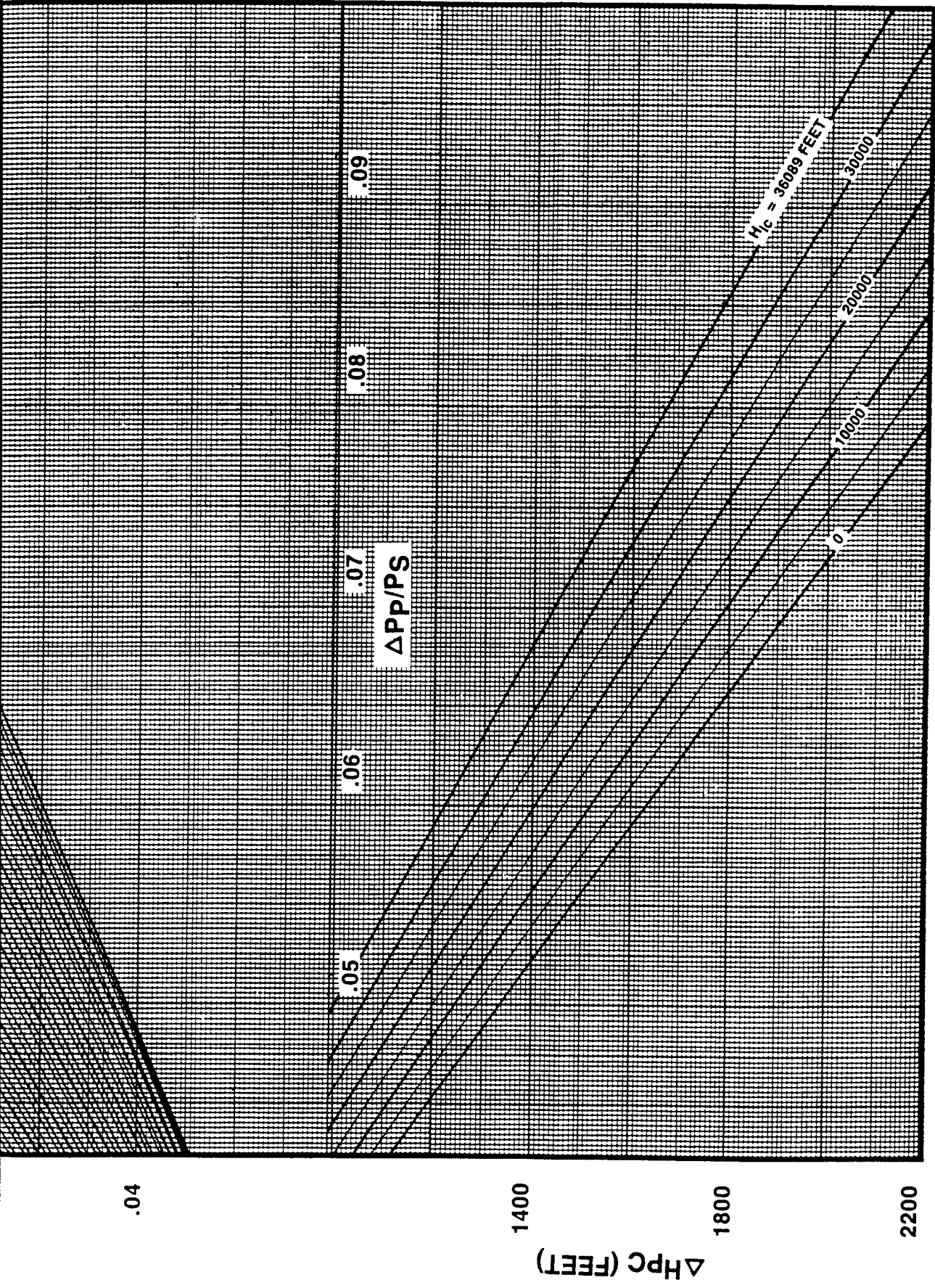


$\Delta M_{PC}, \Delta H_{PC}$  vs  $\Delta P_P/P_S$

C-1-11

①

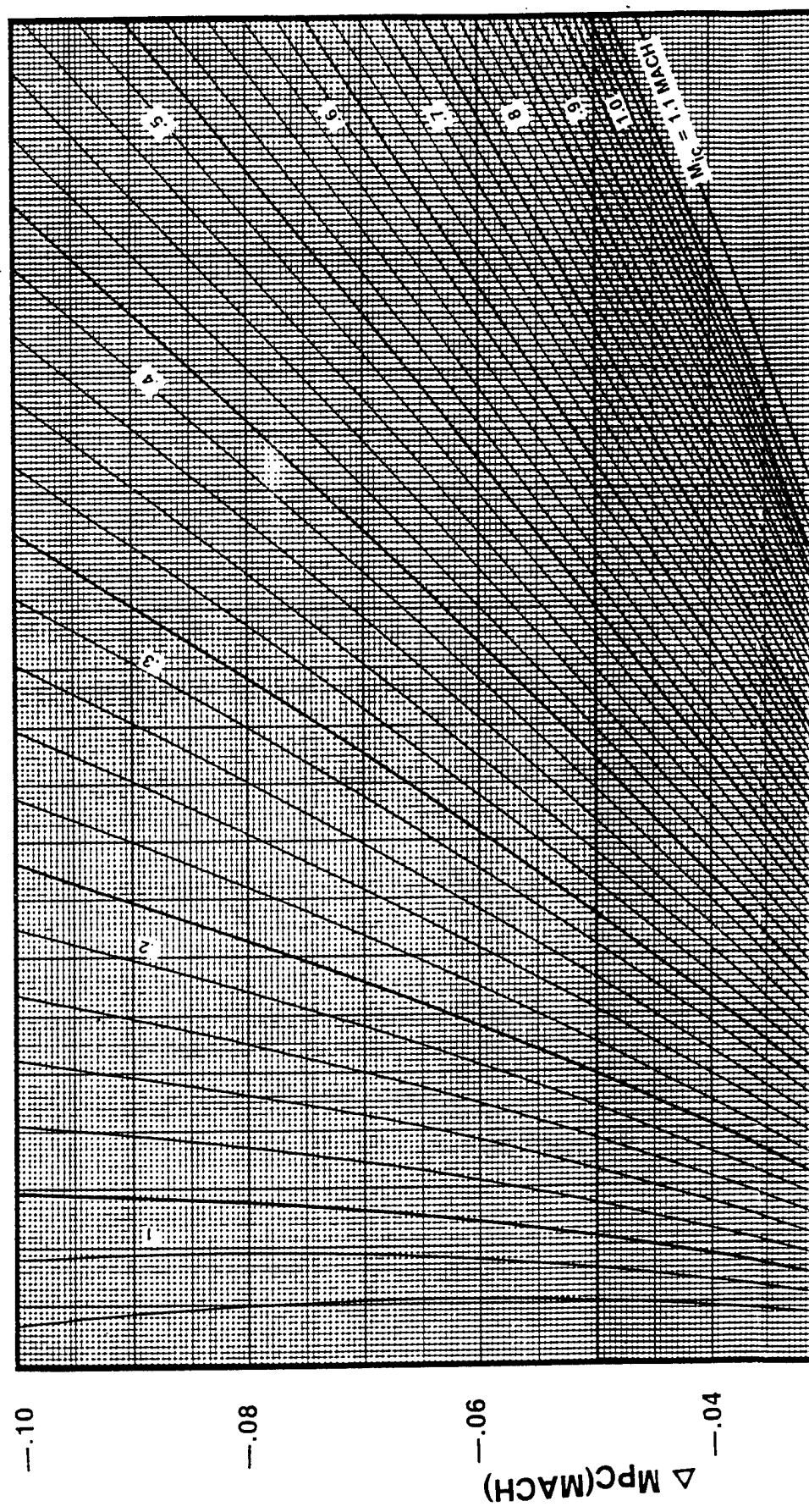


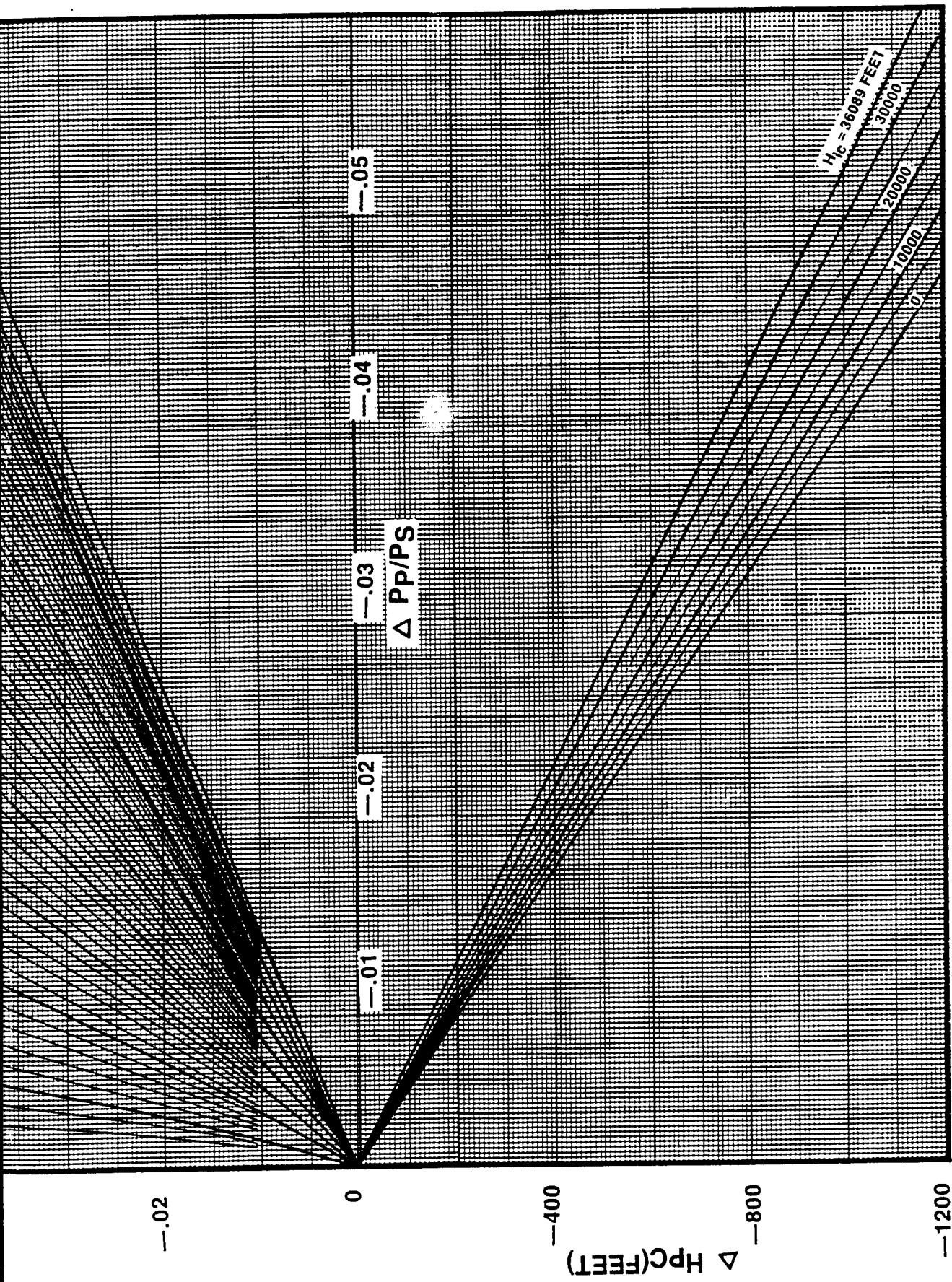


—  $\Delta M_{PC}$ , —  $\Delta H_{PC}$  vs —  $\Delta P_p/PS$



①

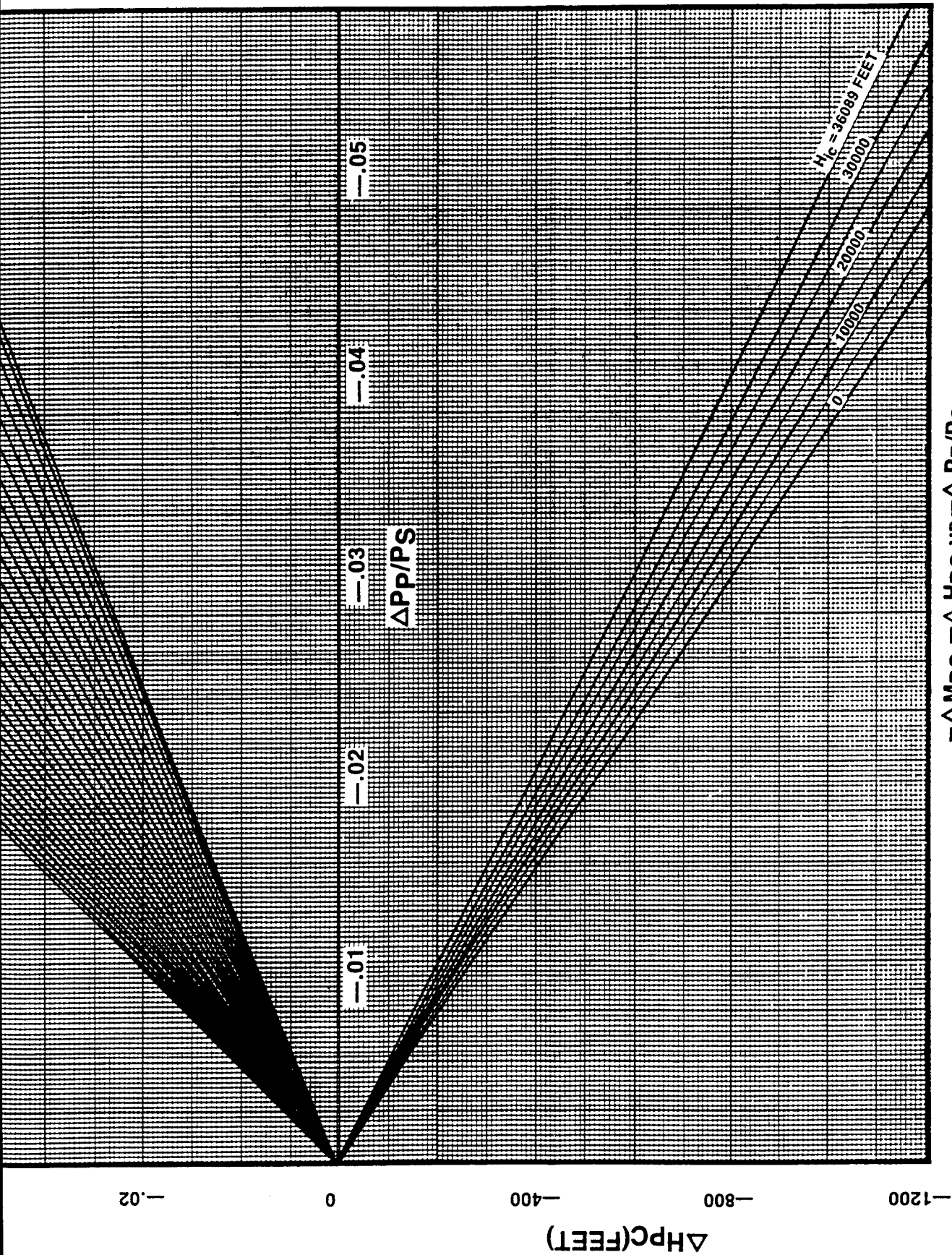




$-\Delta MPC, -\Delta HPC$  vs  $-\Delta PP/PS$

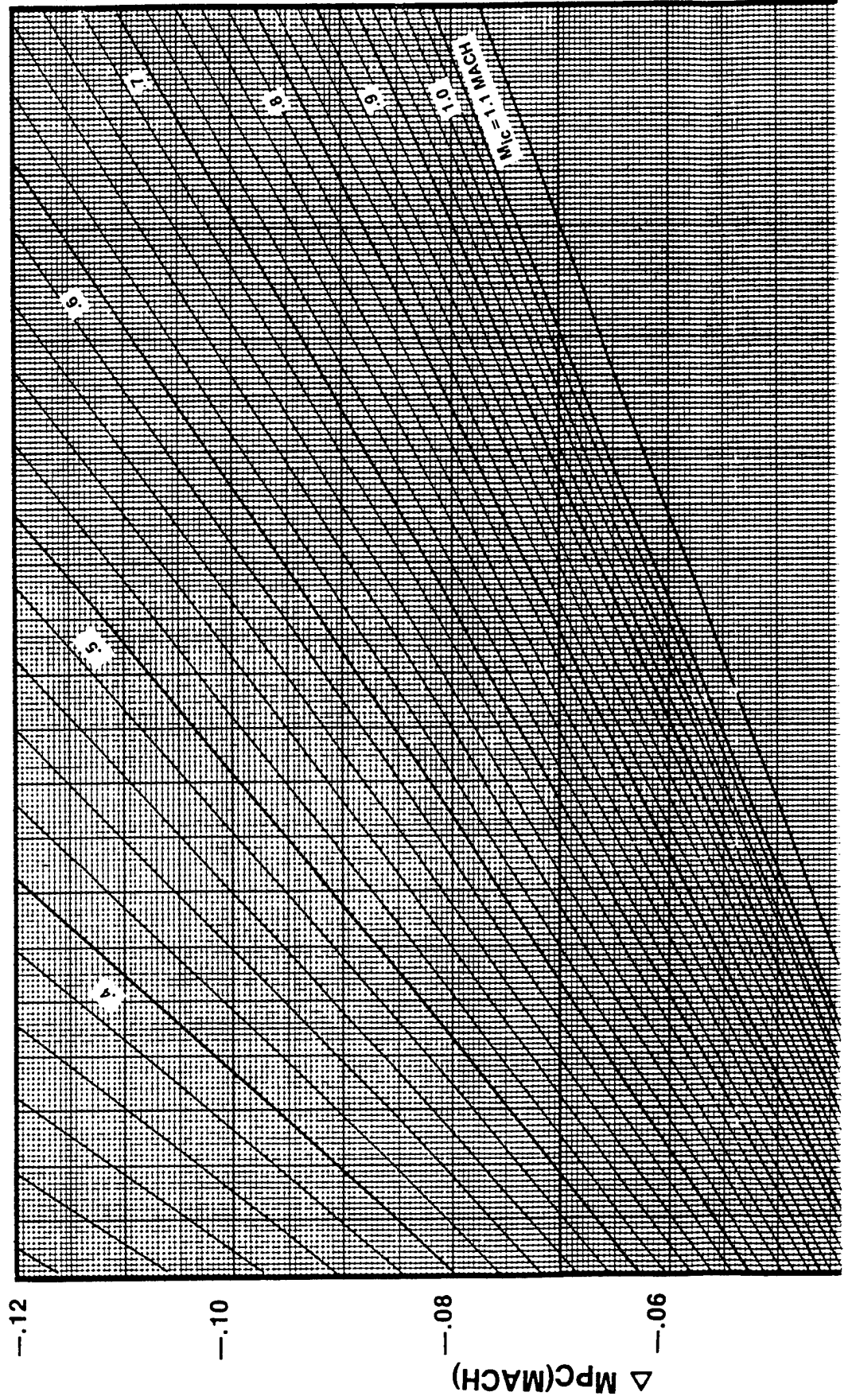


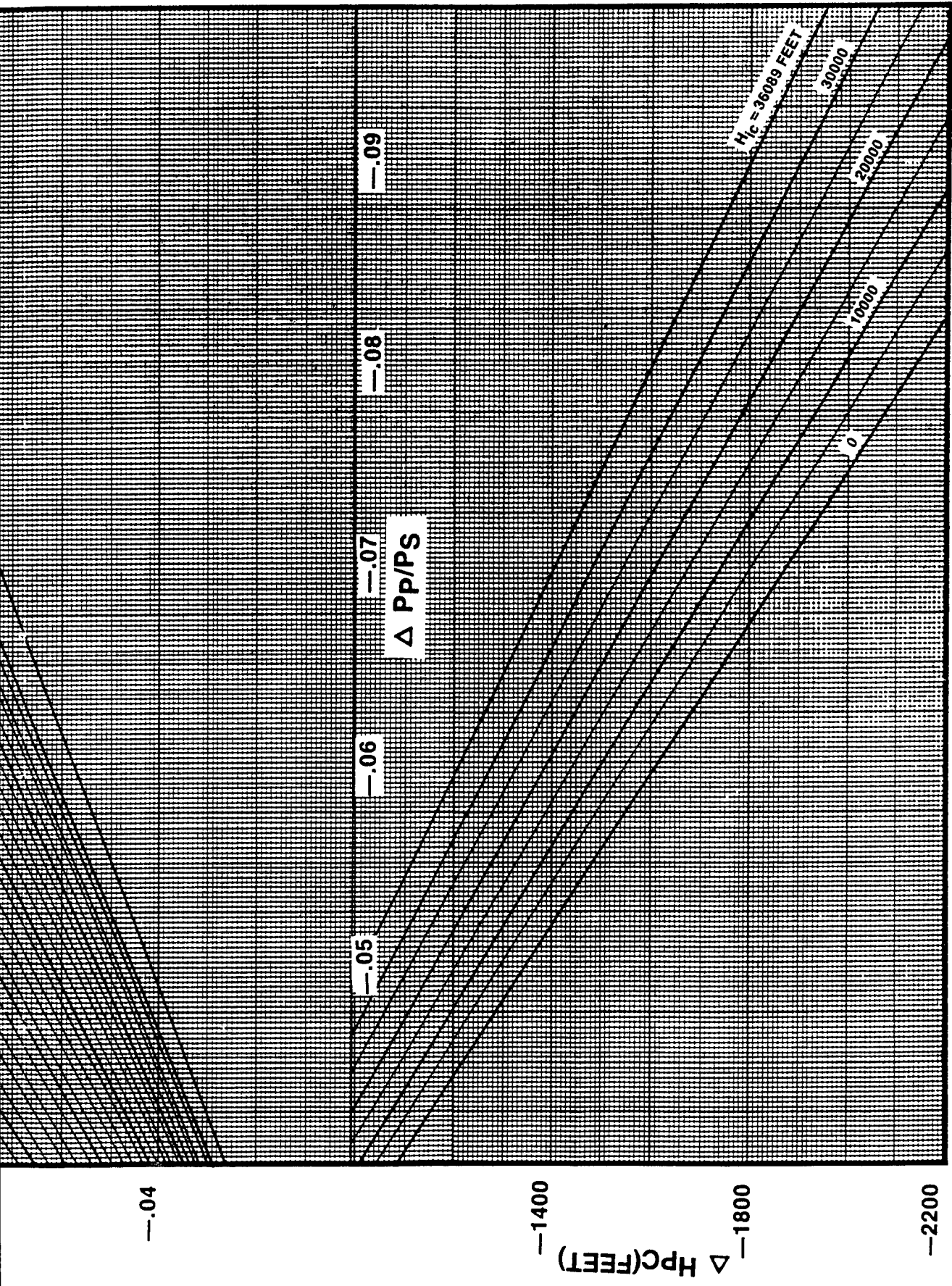
The graph shows the relationship between the Mach number  $M$  and the parameter  $\Delta M_{pc}(MACH)$  for a critical Mach number  $M_c = 4.0$ . The y-axis, labeled  $\Delta M_{pc}(MACH)$ , ranges from 0.04 to 0.10. The x-axis, labeled  $M$ , ranges from 0.0 to 1.0. A series of curves are plotted, labeled with values from 0.0 to 1.0. A diagonal line is also shown.



$-\Delta MPC; -\Delta HPC$  vs  $-\Delta PP/PS$

C-1-14

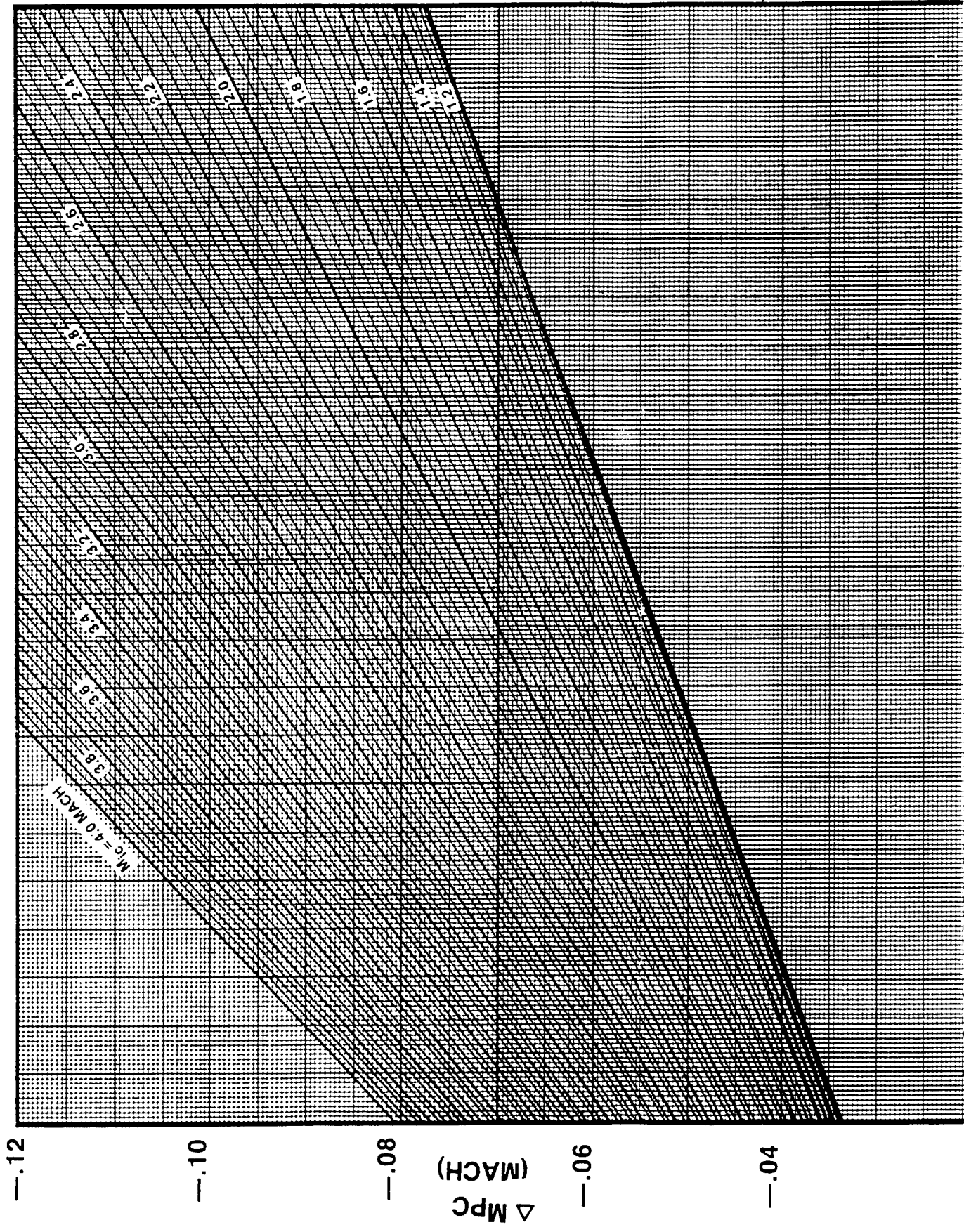


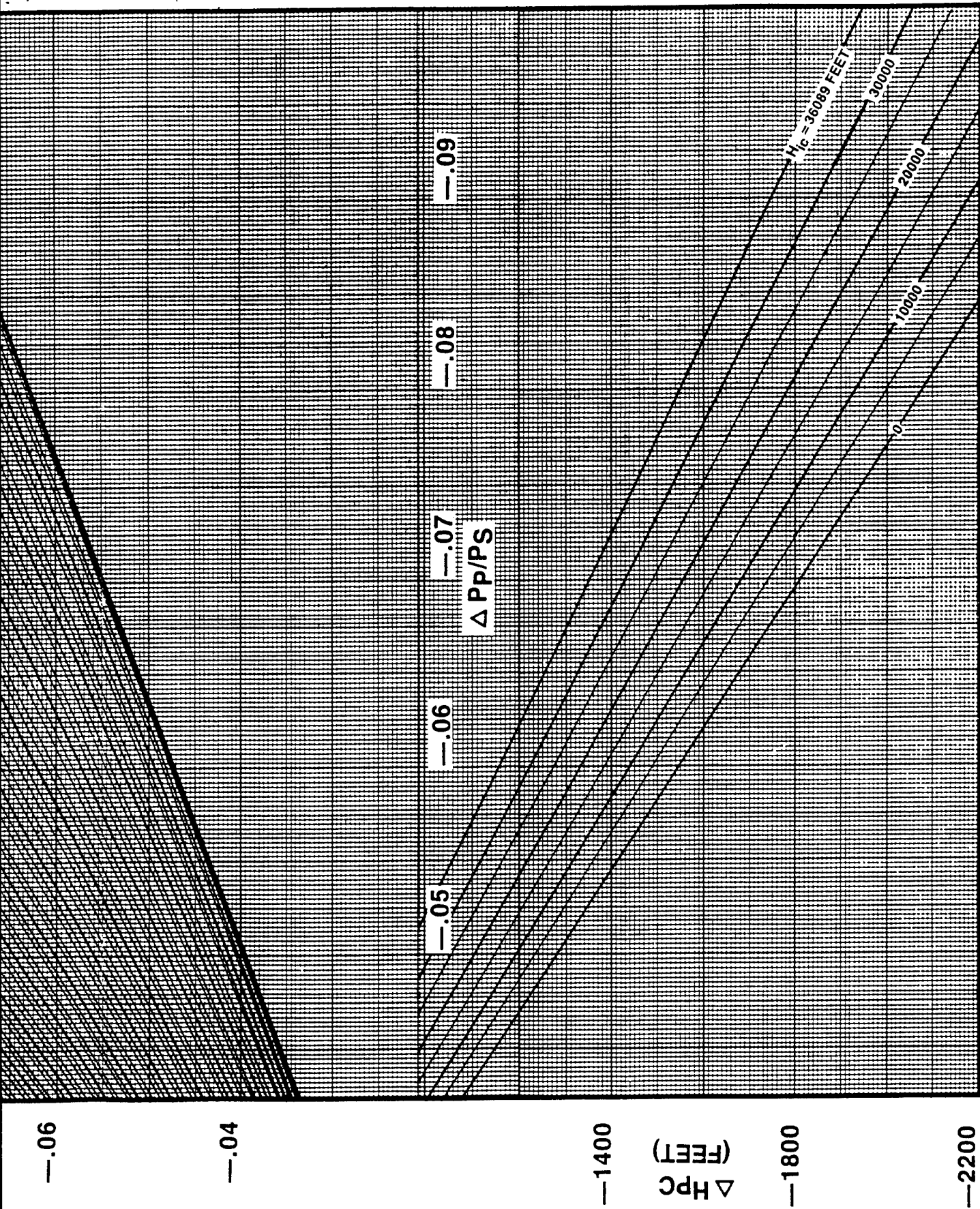


$-\Delta M_{PC}, -\Delta H_{PC}$  vs  $-\Delta P_p/PS$



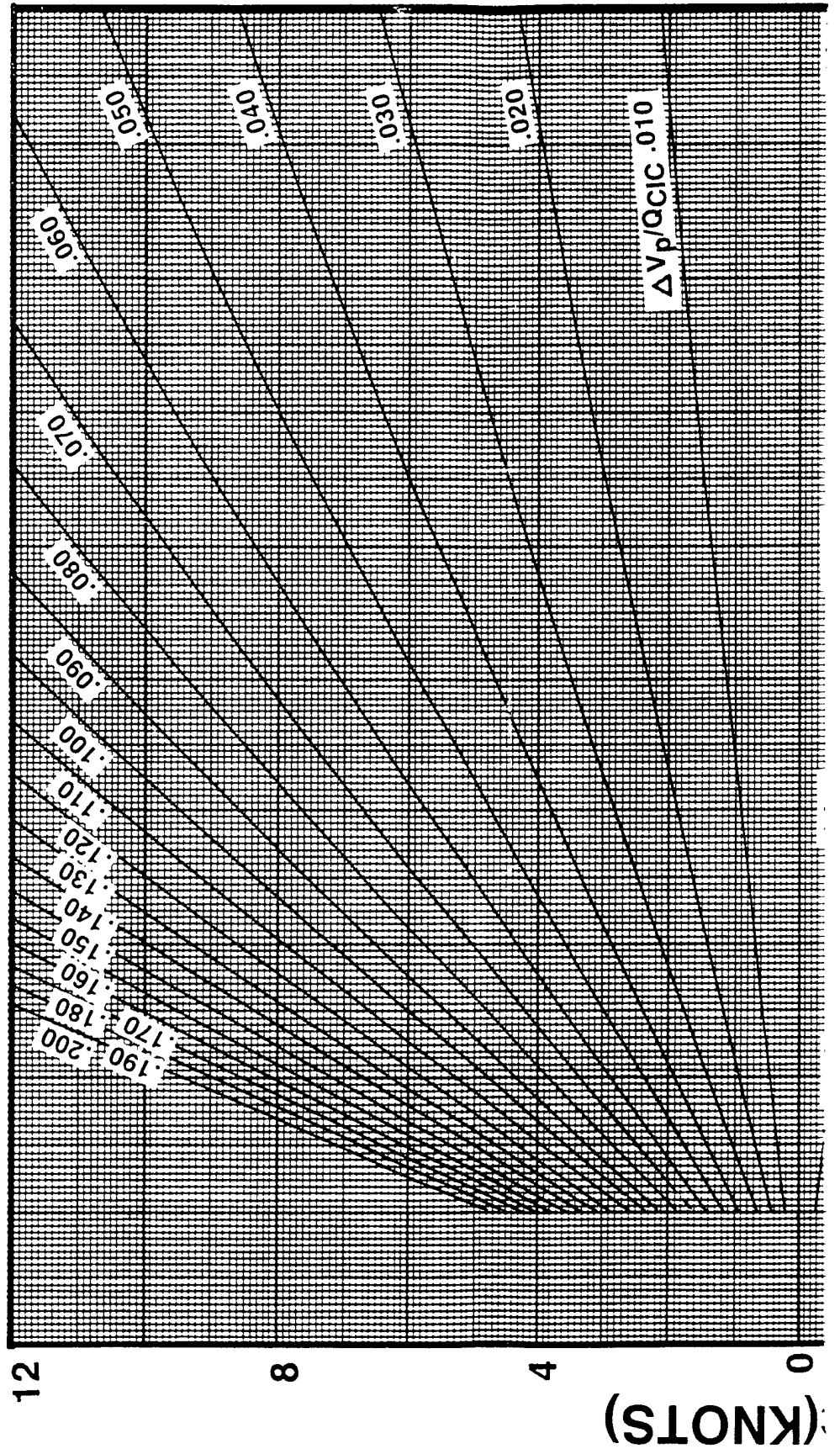
①





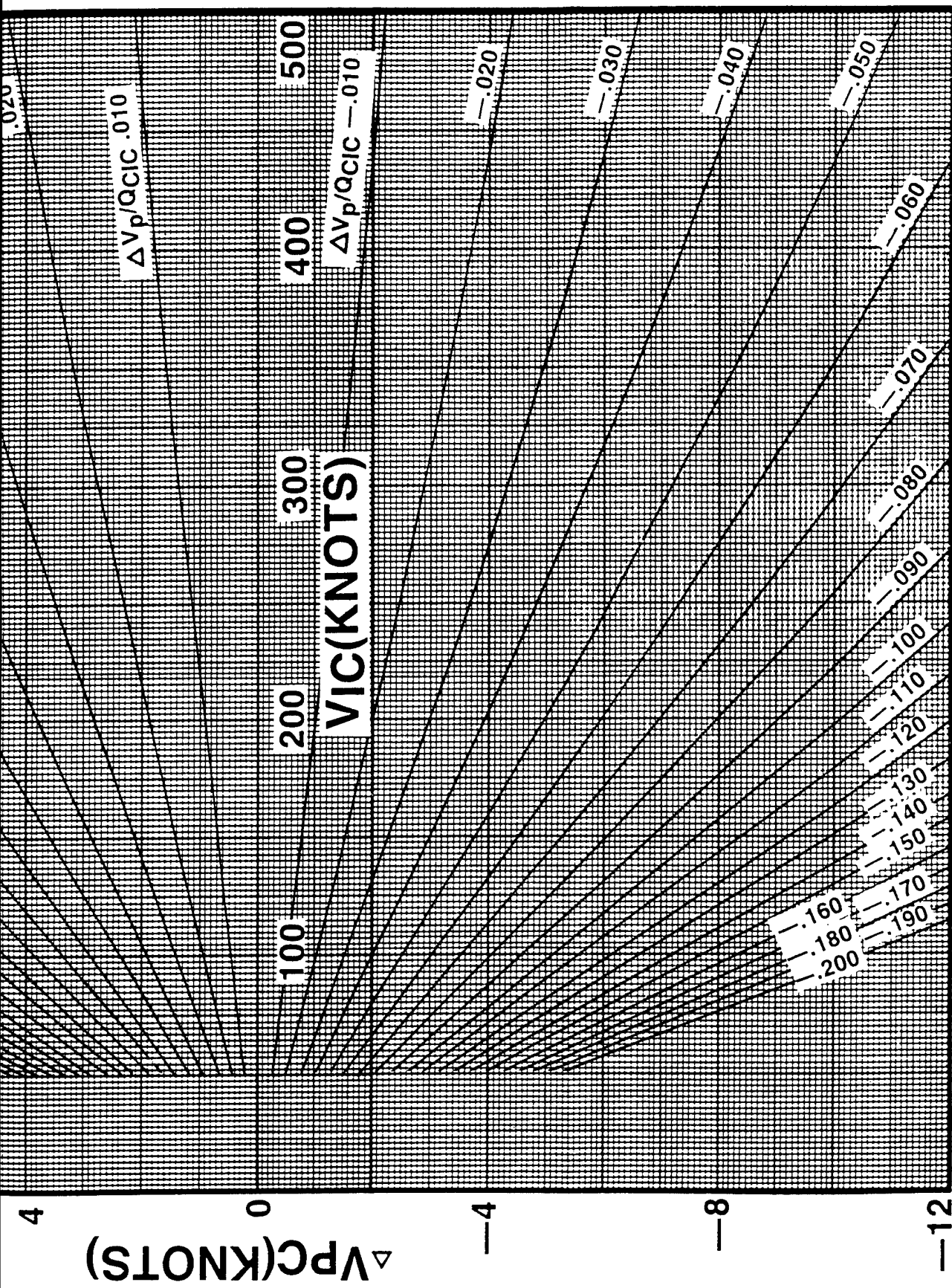
—  $\Delta M_{PC}$ , —  $\Delta H_{PC}$  vs —  $\Delta PP/PS$

1





12

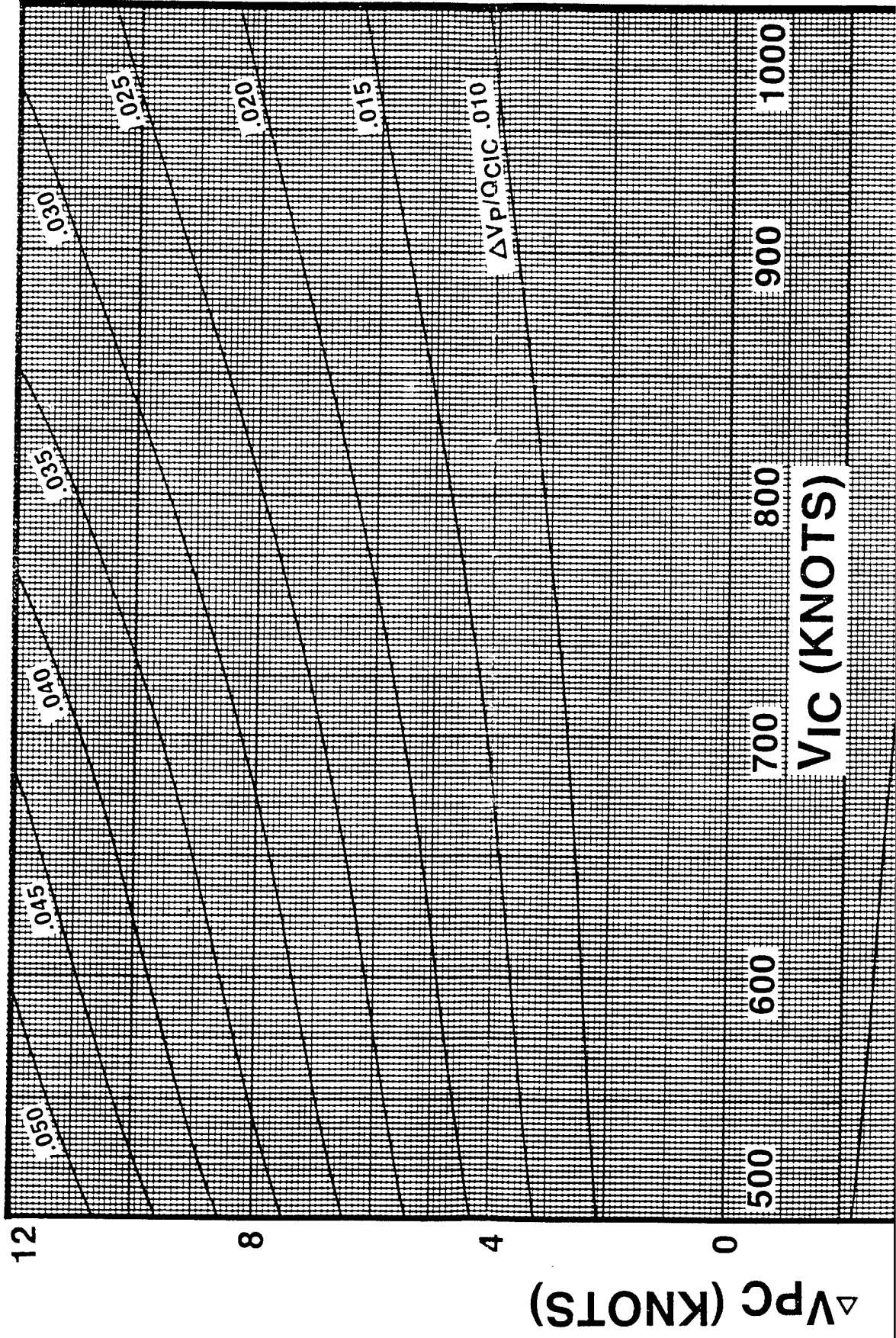


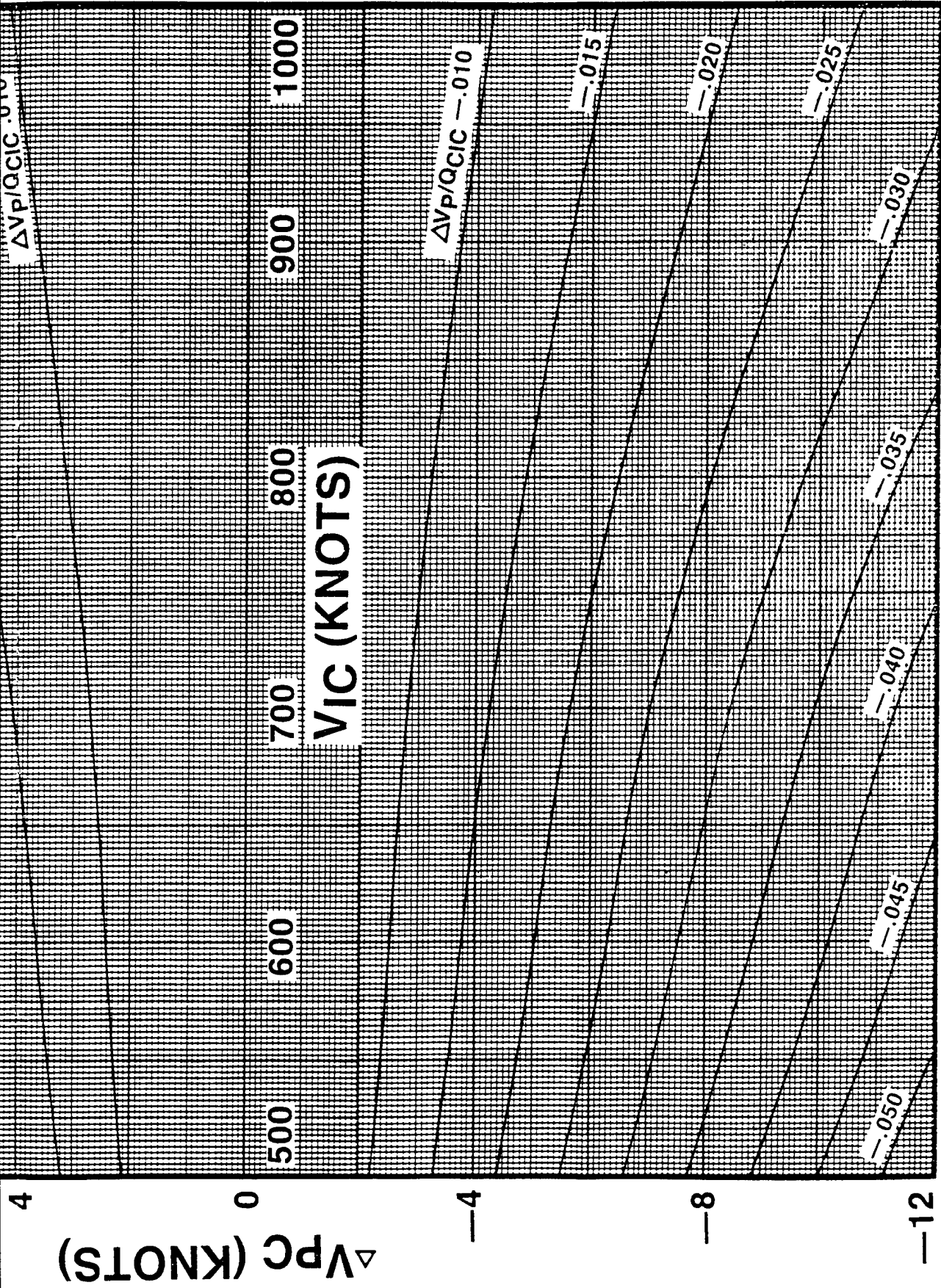
C-1-17

$\Delta V_{PC} \text{ VS } V_{IC} @ \frac{\Delta P_P}{q_{cic}} = \text{CONST}$



①



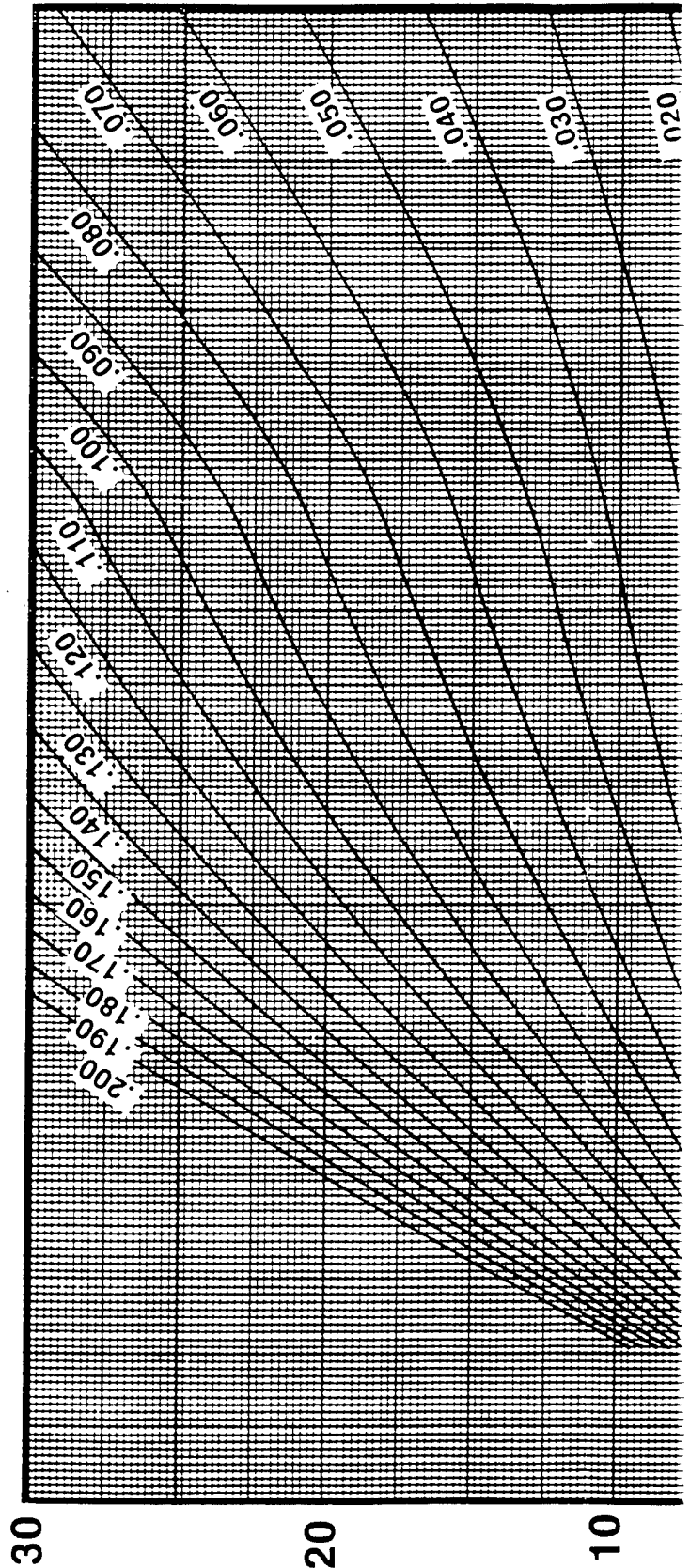


$\Delta V_{PC}$  VS  $V_{IC}$  @  $\frac{\Delta P_P}{q_{cic}} = \text{CONST}$

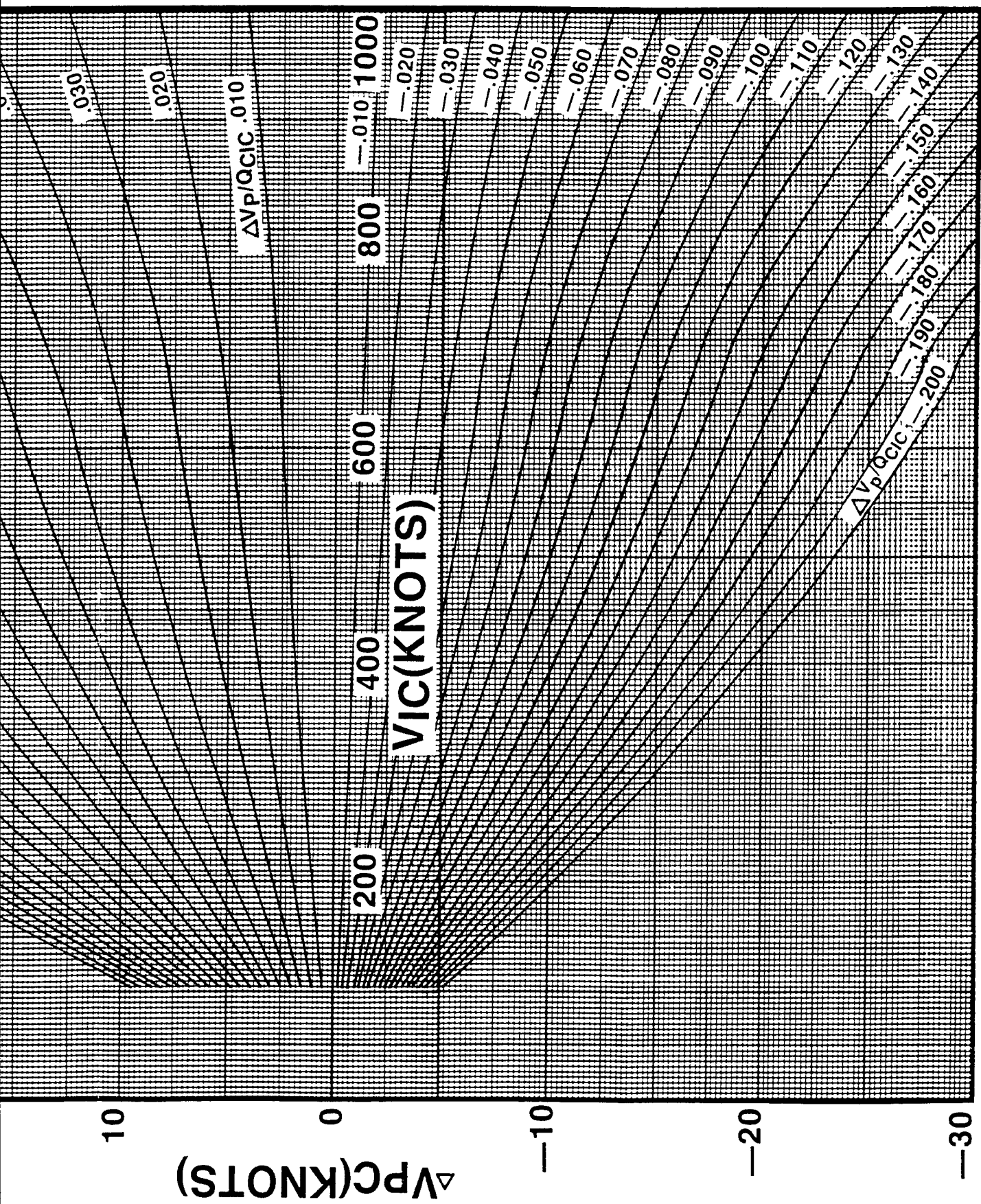
C-1-18

2

1



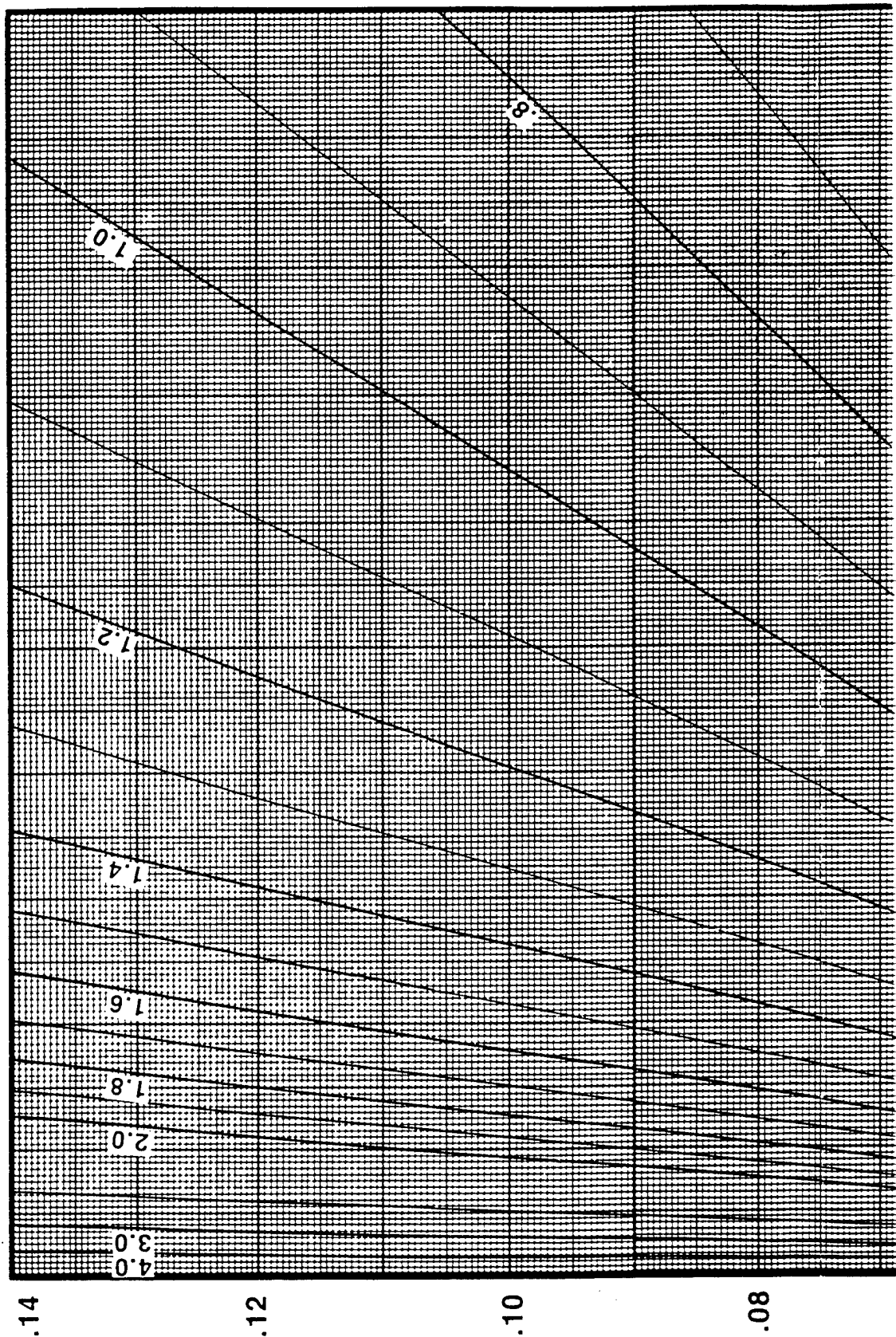
2



$\Delta V_{PC}$  VS  $VIC$  @  $\frac{\Delta P_P}{q_{cic}} = \text{CONST}$

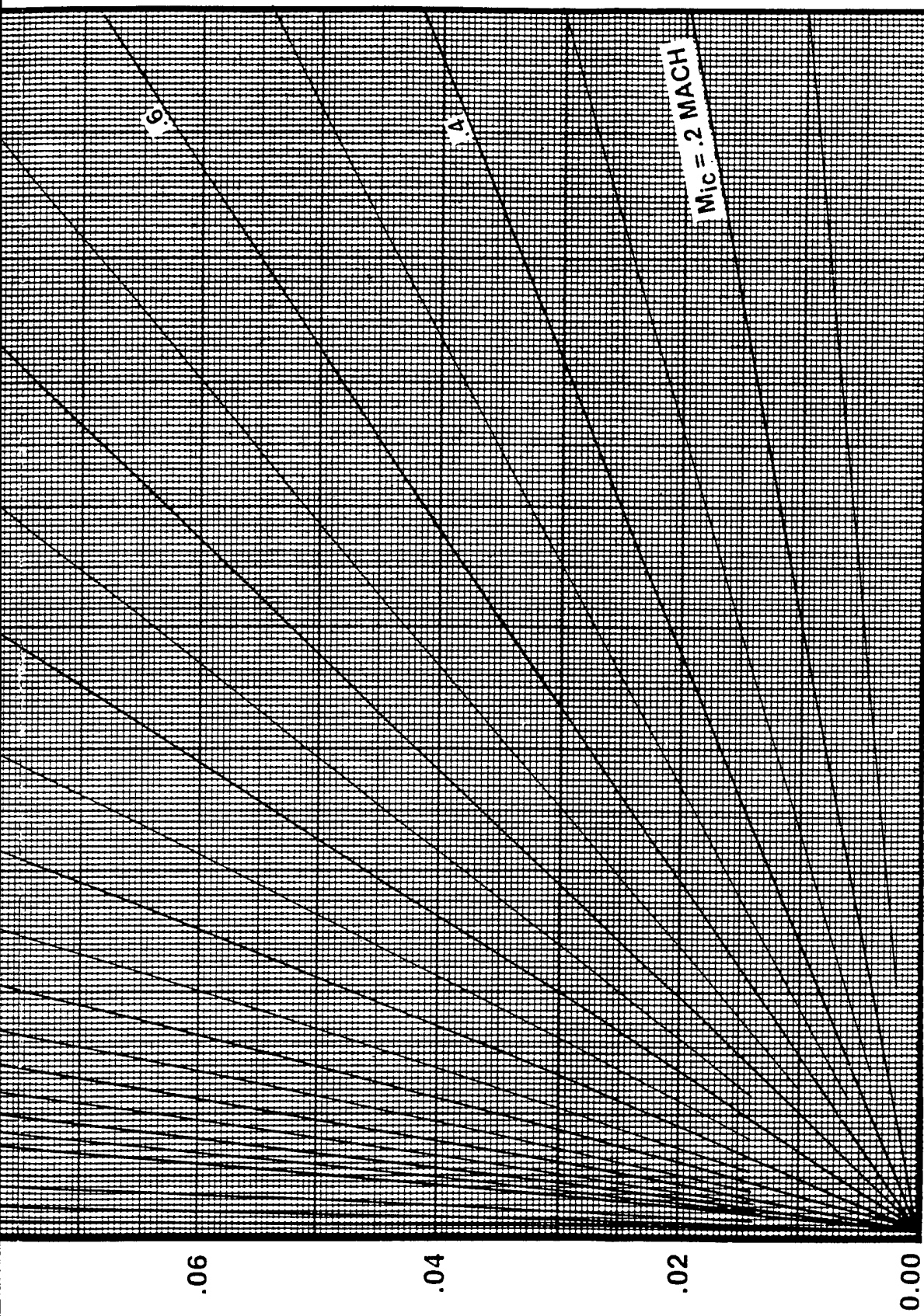


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HACH NO.)

$\Delta M_{PC}$  (MACH)



0.00

0.02

0.04

0.06

0.08

0.12

0.16

0.20

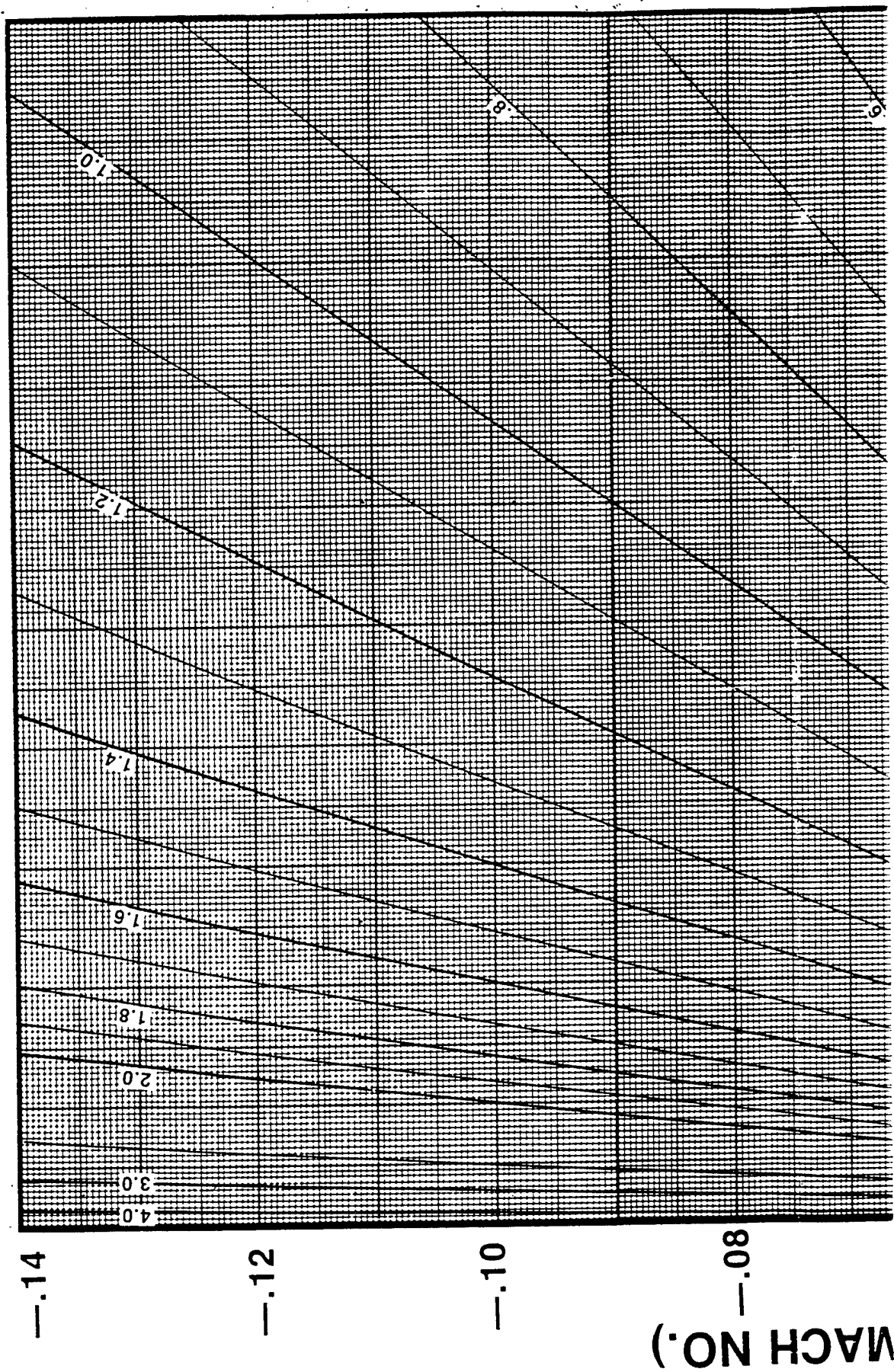
$\Delta P_p/QCIC$

$\Delta M_{PC}$  VS  $\Delta P_p/QCIC$

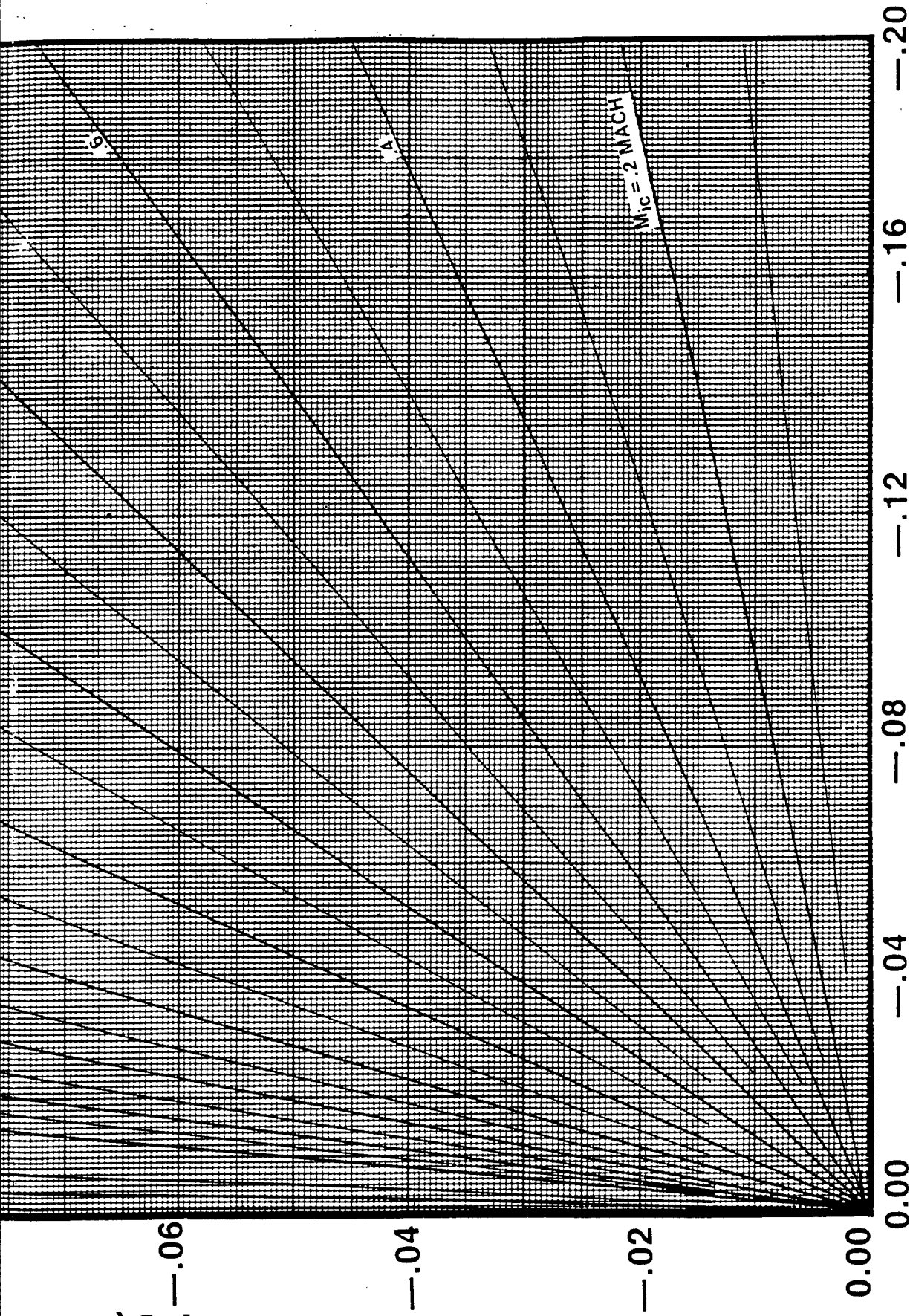
C-1-20

2

①



$\Delta M_{PC}(\text{MACH})$



0.00

-0.04

-0.06

0.00

-0.04

-0.08

-0.12

-0.16

-0.20

$\Delta P_P/Q_{CIC}$

$-\Delta M_{PC} \text{ VS } -\Delta P_P/q_{cic}$

C-1-21

$M_{\infty} = 2.0 \text{ MACH}$

(2)